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WHOLE
NUMBER 107

THE HIGH SCHOOL OF COMMERCE, NEW YORK CITY.

THIS unique school was described as to the building in Mr. Wharton's excellent article on "High School Architecture in the City of New York," in the June issue of this journal. The illustrations were held over that they might be inserted in connection with the special subject of commercial education as treated in this number.

In his latest report Mr. Maxwell says that this high school aims to provide a training which shall be broad and liberal in its character, and at the same time acquaint the students with the principles and technique of commercial transactions. With this end in view the following course of study has been planned:

FIRST YEAR.

REQUIRED.

	Periods
English	4
German, French, or Spanish	4
Algebra	4
Biology (with especial reference to materials of commerce)	4
Greek and Roman history	2
Stenography	2
Drawing and penmanship	2
Physical training	2
Music	1
Total	25

Physiology is taught with biology and with physical training.

SECOND YEAR.

REQUIRED.

	Periods
English	3
German, French, or Spanish	4
Plane Geometry	3
Chemistry (with especial reference to materials of commerce)	4
Mediæval and modern History (with especial reference to economic history and geography)	3
Drawing	2
Physical training	2
Total	21

ELECTIVES.

	Periods
German, French, or Spanish	4
Business forms and bookkeeping	3
Music	1

THIRD YEAR.

REQUIRED.

	Periods
English	3
German, French, or Spanish	4
Algebra and geometry	3
Physics	5
English history (with especial reference to economic history and geography)	3
Physical training	2
Total	20

ELECTIVES.

	Periods
German, French, or Spanish	4
Bookkeeping and commercial arithmetic	4
Stenography and typewriting	4
Drawing	2

FOURTH YEAR.

REQUIRED.

	Periods
English	3
German, French, or Spanish	4
Economics and economic geography	4
History of the United States (with especial reference to industrial and constitutional aspects)	4
Physical training	2
Total	17

ELECTIVES.

	Periods
German, French, or Spanish	4
A third language	4
Advanced chemistry	4
Trigonometry and solid geometry	4
Elementary law and commercial law	4
Business correspondence and office practice	4
Stenography and typwriting	4
Drawing	2

FIFTH YEAR.

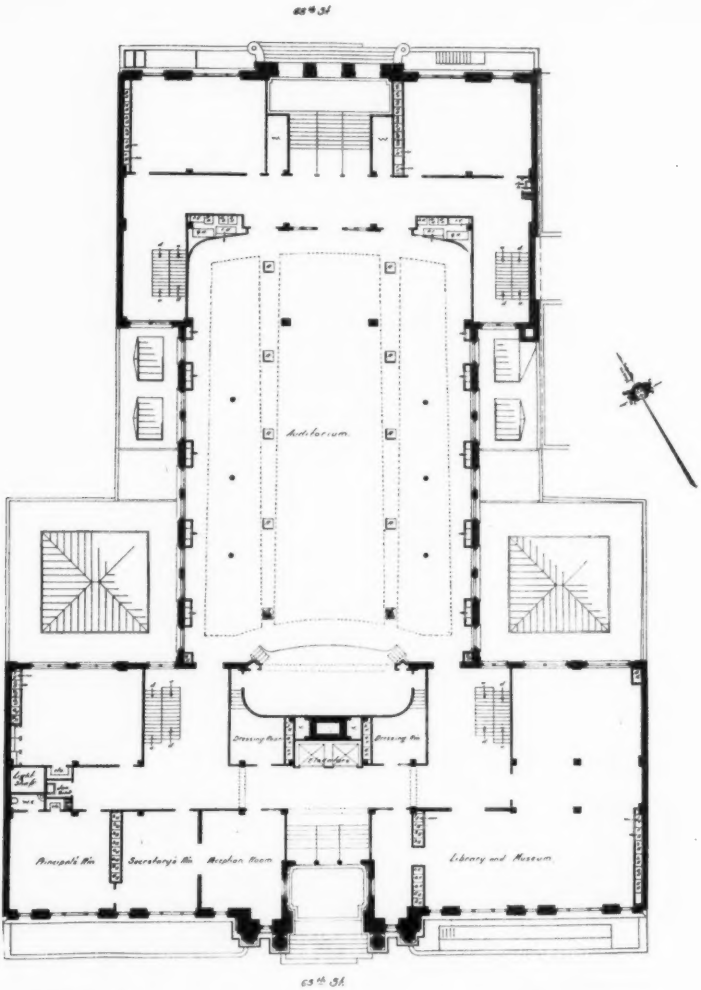
REQUIRED.

	Periods
English	3
Logic, inductive and deductive	3
Physical training	2
Total	8

ELECTIVES.

	Periods
A foreign language	4
Advanced mathematics	4
Advanced physics	4
Industrial chemistry	4
Economic geography	4
(Nineteenth century history, European and Orient, diplomatic history, United States and modern Europe)	4
Banking and finance, transportation and communication	4
Accounting and auditing	4
Business organization and management	4
Drawing	4
Advanced economics	3

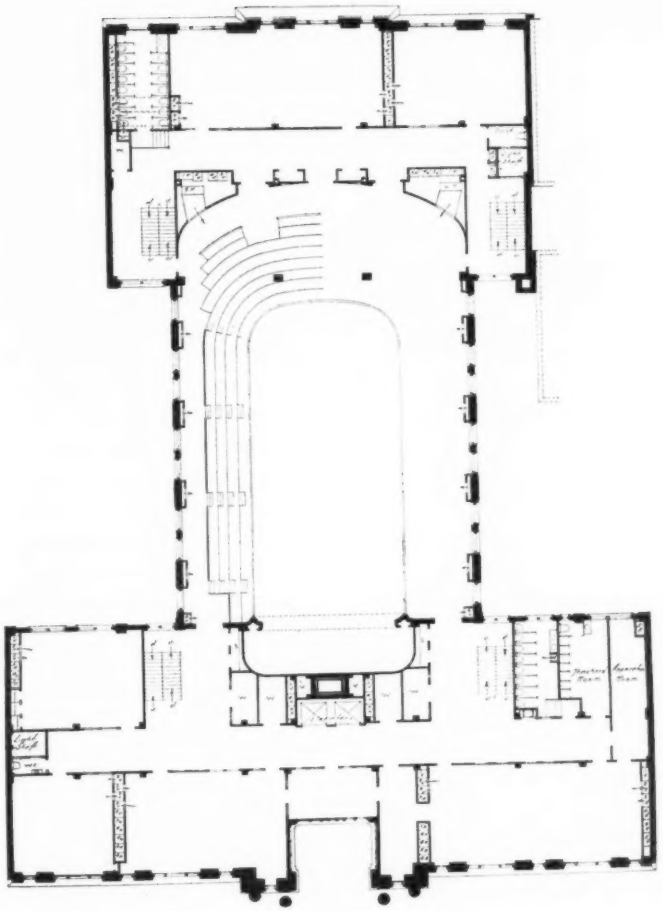
There are certain general provisions which explain the workings of this course. A period may not exceed fifty minutes. Subjects are divided into two classes, those requiring preparation and those which do not. Of the former the student shall not be required to take more than twenty-one periods a week. Drawing and art study, physical training, and vocal music are considered as subjects not requiring preparation. No new class in an elective subject need be formed in the second year for less than twenty-five pupils; in the third year, for less than twenty pupils, in the fourth year, for less than fifteen pupils. Exercises in voice-training and declamation shall be given at least once a



C.B.J. Snyder, Archt
Supt of School Buildings
Park Ave and 59th St
Boro of Manhattan

FIRST FLOOR
Scale 1/8 inch = one ft

The High School of Commerce
65th and 66th Sts 1st Broadway and Amsterdam Aves
Borough of Manhattan
City of New York



C.B.J. Snyder, Arch't
Supt. of School Buildings
Park Ave. and 59th St.
Boro of Manhattan

SECOND FLOOR.
Scale 1/8 inch = 1 ft.

THE HIGH SCHOOL OF COMMERCE.
65th and 66th Sts. bet Broadway and Amsterdam Ave.
Borough of Manhattan,
City of New York

week during the first year, and they may be continued throughout the course.

In order to graduate from the High School of Commerce a student must have studied at least one foreign language for at least three years, have accomplished satisfactorily all the other required work, and have taken a sufficient number of elective studies so that the total amount of required and elective studies shall equal 3,000 periods of work requiring preparation, and shall extend over not less than three years and not more than six years. Due credit shall be given by the principal for work done by a pupil in other high schools. A certificate of graduation shall be awarded at the close of the fourth year to each student who satisfactorily completes the work up to that point. The fifth year shall be regarded as supplementary to the regular course, and shall be open to all students who have graduated from a high-school course of four years.

It may be of interest to compare with the course of study for a specialized school, like the High School of Commerce, the report of the Committee of Nine appointed by the Business Education Department of the National Educational Association. The members of this committee have been at work during the past year, and their efforts have been directed toward making a report that will be of value in the ordinary high school. It is not claimed for the report that it is a model in all particulars, but only that it is suggestive and embodies the principles that ought to be recognized in arranging a course of instruction in which business education will be given particular recognition. The length of the period in this course is fixed at forty-five minutes, or rather less perhaps than that of the High School of Commerce.

REPORT OF COMMITTEE

FIRST YEAR — FIRST HALF

	Periods
English	5
German, French, or Spanish	5
Algebra	5
Drawing	2
Bookkeeping	3
Penmanship	3
Total	23

SECOND HALF

	Periods
English	5
Same language continued	5
Algebra	5
General History	5
Bookkeeping	3
Penmanship	2
Total	25

SECOND YEAR—FIRST HALF

	Periods
History of English literature and composition	3
Modern language continued	5
Commercial arithmetic	5
Study of commercial products or local history and industries	5
Bookkeeping	5
Total	23

SECOND HALF

	Periods
English continued	3
Modern language continued	5
English and European History	5
Commercial geography	5
Typewriting	5
Drawing	2
Total	25

THIRD YEAR—FIRST HALF

	Periods
Rhetoric and composition	4
Plane geometry	5
Physics or chemistry	5
Bookkeeping and office practice	5
First language continued, or second modern language, or shorthand and typewriting	5
Total	24

SECOND HALF

	Periods
Commercial correspondence	2
Political economy	5
Physics or chemistry continued	5
Commercial law	5
United States history	4
Election of first half continued	4
Total	25

FOURTH YEAR — FIRST HALF

	Periods
English literature, themes and parliamentary practice	5
History of Commerce	5
Fifteen periods to be selected from	
Language elected continued, or shorthand and typewriting continued	5
Physics or chemistry	5
Accounting, organization and auditing	5
Solid geometry	5
Mechanical drawing	5

SECOND HALF

	Periods
English continued	5
Civil government	5
Fifteen periods to be selected from	
Same election continued	5
Physics or chemistry continued	5
Banking and finance	5
Advance commercial arithmetic	5
Advertising, study of trade journals, and commercial English	5

GEORGE H. LOCKE.

THE REMOTE RELATION BETWEEN EDUCATION AND BUSINESS.

In the discussion of business and education we should avoid dogmatizing. Our most unassailable theories on this subject, asserted unconditionally, will be frequently disapproved by obstinate facts. We must also remember the paramount importance of bread-winning for many of our students. Our fine-spun theories on education as a growth, on the expansion of the child-mind, on the development of the imagination, on the cultivation of broad tastes, often have no place in life with stern necessity; our pedagogy is idealized too much. We take too little note of the disadvantages and misfortunes which beset the lives of people; the death of a parent, for example, may ruin the career of a prospective savant or artist. The best we can do is to say that whenever an educational principle is true about business, it is true; and omit the further formulation of laws.

The relation between education and business is close or remote, according to what we mean by "business" and what we mean by "education." If by the latter we mean a short, cheap process like horse-breaking, which fits in a short time for the performance of mechanical duties in offices, stores, and factories, then it deserves no further consideration. Business education is not the training of servants for capital. If we mean by "business" wage-earning and nothing more, then we belittle business. Yet there is a justifiable tendency on the part of capital to degrade, through advertising and machinery, the character of service which it needs. Clerks in department stores find no need of personality, and are not encouraged to build up a clientèle, but instead are expected merely to hand out goods "as advertised." Capital can best protect itself by permitting intelligence and discretion to be exercised for it by the smallest possible number of the faithful and trustworthy. Here there is little relation between education and business. And, generally speaking, education has practically

nothing to do with business, if by "business" we mean only the technical routine of offices, stores, and factories.

Business education, as at present understood, is narrow and limited, preparing for positions in only a small part of the field of business. It includes the study of bookkeeping, commercial arithmetic, shorthand, typewriting, mechanical drawing, shop practice in wood and metal, and possibly commercial German. The objection to this course is that not all intending to enter business will take positions in offices, counting-houses, foundries, and machine shops. And it does not appear that a commercial traveler will sell more goods for having studied bookkeeping rather than Greek, or that a purchasing agent will buy less cheaply or honestly by reason of not having studied shorthand.

Many suppose that business demands of the school definite, expert training in commercial and technical studies, such as have been mentioned above; and little difference does it make to the exacting world if the young minds are incapable of learning all these branches—this special training the school must give, and give rapidly, too. Growth is nothing, manufacture is everything. The school is expected to develop in children a routine skill which will, *ipso facto*, make the three weeks' tyro an efficient automaton or more in the business world. All this is based on a wrong idea that mechanical efficiency is the chief or sole requirement made of one entering upon a mercantile career. The school cannot produce even this machine-like efficiency, not to speak of the needed keenness of judgment. The task is impossible, for contact is not necessarily training.

The other, harder, and more important side of preparation for business is rarely in the public view. It sets before all who intend to earn their livings in business a standard of attainment disagreeable and repulsive even—one in which perfection is impossible, and one in which moderate success is reached only by self-sacrifice, continual exercise of the will, and infinite patience. Further, perfection in this side of business education does not enable the possessor to keep the books or do the correspondence of even a small business. Besides, everybody presupposes the requisite virtues in himself, and is offended if

others do not also discover them in him. But their possessor once known to be quiet, careful, neat, courteous, respectful, attentive, sober-minded, thoughtful, foresighted, busy, prudent, close-mouthed, honest, and of good habits, will have little difficulty in finding employment. One who leaves school with these traits well developed, and also well known to those employing labor, will find that the relation between business and education is not one that needs to cause him any thought or worry.

These traits the school cannot always teach successfully, for the pupils and parents object to having them taught in connection with arithmetic and reading. But the fact remains that the teaching of good conduct, even when it destroys the teacher's popularity or costs him his position, goes deeper than those familiar only with the behavior of children in school would suppose. It is true that pupils most disorderly and inattentive in school become quiet and courteous on gaining employment. They seem to have a sense (or develop it after losing a position or two) that tells them the need of good traits of character in business, and they seem to have mastered the art of conduct perfectly. Yet instruction in it in school would have been better for them and the business which they follow. As between these two requirements, that a student shall have the technical knowledge necessary to do the work of a position, or the qualities of head and heart which he needs to hold that position and gain still higher positions, all know which is more important. The student and his friends insist on technical instruction, seeing nothing else to business education, while employers merrily weed out the ill-mannered and rattle-brained; and the world is satisfied.

This character education, the most practical sort of training for business, continues to be given in other schools, whose purpose is not merely preparation for business; not because that is one of their purposes, but rather because students find in these schools the sort of training that makes them capable of doing what business requires. They find training quite as much in traits as in the technique of business or shopwork. This is perhaps less true of schools offering the traditional course of study than of

those which give training in "real business." Students generally are better pleased with the toy money of accounting than with geometry. It is also true that business education suits the inclination of most pupils better than do those studies which require close application and consecutive thought. Therefore many succeed better in bookkeeping than in algebra or Latin grammar.

Too often the purpose of the old commercial course has been to make office help and salary-earners, such as they were, in the shortest time. The result has been for the most part unsatisfactory, largely, let us say, because the conditions were difficult or even impossible. But the demand for commercial instruction has shown itself permanent, and schools now seek to meet it on a rational basis, that students may get from the studies all the educational benefits in them. Schools now seek to embody in their commercial studies all the advantages which other studies possess, namely, good equipment, skilful instruction, organization, and continuity. The results are good, though two years' instruction in shorthand or bookkeeping seems excessive. By thus lengthening the course some schools have bravely refused to rob the cradle for the office, the store, the factory. They have recognized that training is the chief, and sometimes the only, good in real education. They thus admit the student's poor ability to acquire. They understand that "acquisition or auxiliary studies" are of comparatively little value in many cases, and that not all material can be shaped to the needs of business, even in a long period of time.

By thus reorganizing their business courses on an educational basis, these schools have placed themselves side by side with the grammar school, the high school, and the college in agreeing that their responsibility to the student is not discharged by merely bringing him into contact with studies. They see the necessity of a training extending over a long period of time. Heretofore business education has ignored this responsibility, and so has not met with that degree of success in education which was its by right. Other schools, from child-garden to college, have accepted this responsibility, and have consequently been

more successful in education. This obligation has been well stated by President Pritchett of the Massachusetts Institute of Technology:[1] "It is the duty of a school to teach lofty moral purpose; to teach a sympathetic and intelligent understanding of men; to teach clear thinking; to teach a capacity for thorough work." No school can evade these obligations and responsibilities. Any school giving this fourfold training to a student is doing for him all that the world can expect, but he is not yet ready to render any expert service. He is merely prepared to learn some occupation, to pursue "acquisition studies." While it is true that the student is better trained in these four particulars by the old disciplinary studies, there are many good reasons why "acquisition studies" should be pursued with the other and better-organized subjects of the course. One is that a student with leanings toward shorthand, bookkeeping, or mechanical drawing can test his aptitude for these studies, and so determine better whether he can advantageously follow any one of them in his business life. Thus he may be saved disastrous experimenting later. Thus he has a fairer survey of the field of instruction and occupation. While our commercial courses rarely, if ever, develop an accountant or stenographer, they enable many to find out whether they are fitted for these occupations. Again, these business courses, properly conducted, should make leaders, not employees merely able to hold positions. Combined with other instruction, they should develop minds capable of initiative. They should produce a restless commercial ambition by showing the possibilities of business. All this they can best do by broadening the intelligence, rather than narrowing the field of instruction. The above fourfold responsibility is to the head, not merely to the hand; to the human being, not to the human machine; to all the race, not to the employers only.

The success with which education is meeting this fourfold responsibility can well be measured by the criticisms which business men make upon the school product. Some of the strictures are in a measure unjust, but for the most part they are

[1] Based on a newspaper report.

helpful to education. The sum of most of their criticisms is that the school does not drill enough on the essentials of expression, handwriting, spelling, ability to speak or write clearly and briefly, calculations of all sorts, and whatever other forms the expression of business ideas may take. No matter how skilful a stenographer may be, inability to spell neutralizes that skill; a bookkeeper's skill in calculation must be great, or his accounts will not be accurate, and he will spend hours of his employer's time correcting needless errors; if bill clerks write their invoices in that illegible scrawl so dear to society belles and schoolgirls, "the house" suffers for it. Training in these important branches is within the province of the school, and is its nearest and most imperative duty, neglect of which is more reprehensible than failure to supplant the business college or the trade school. We may object to the present teaching of commercial and trade studies on the following grounds: They are not well taught for the most part, instruction in them being given too much from the standpoint of acquisition rather than of thoroughness and mastery; they lack continuity; they are not broadening; they are not made disciplinary, as they should be; they are not well organized and interrelated; too often they attract students of somewhat inferior intelligence. They are too often taken with a view to skipping the lower steps in business. They are no substitute for "the bottom of the ladder." In the study of them there is too often a lack of concentration, especially if there is no position awaiting the student at the end of the course.

While it is true that a certain degree of business education is acceptable to the world of commerce, the sort and method of training are not well understood. Neither is the capacity and wish of business to train its own servants fully understood. Many large companies employing hundreds of clerks and stenographers prefer to take into their employ, not those who have learned a way to do the required work, but rather those who can be instructed in the peculiar methods of the firm in question. Bluntly stated in the words of Josh Billings, it is the wish of most firms employing office help that their employees "should

not know so much, rather than that they should know so many things that ain't so." The boy who is promoted from the lowest position to the treasurership or presidency of a corporation is superior at all stages of his work to the school-trained expert. Every employer prefers to have help of good general intelligence, unprejudiced by any previous training, and then "break it in" to suit the peculiar needs and requirements of his own office.

In this connection we cannot do better than recall the timely words of President Rhees, in the March number of the SCHOOL REVIEW:

> Those who welcome every rationally conducted attempt to prepare students in schools for work in offices and factories agree that the technique of any business or trade is to be learned best in the office or factory. Experience there means more for the boy who is seeking employment than commercial courses in school . . . . . That which is of most worth to students is not their drill in technique, but their grasp of fundamental principles and their knowledge of life and of intellectual processes.

Apparently, therefore, expert training for business or trades is hopeless in school. But some consolation remains in this, that the school is a good place for the harder and more disagreeable, but none the less necessary, training in manners, traits, and self-control. Business is system, organization, discipline, drudgery. A school rationally founded on these is better preparation for business than any other. If a school accustoms its inmates to noiselessness, earnestness of words and purpose, economy of words and steps, continual industry, and proper spirit, it is giving the best training for office or factory, though it may violate some prominent educators' ideas of freedom as flagrantly as does the business world itself. Such a school is an antidote to the poison scattered by men with no class-room responsibility who have sought, under the name of "new education," to foist upon schools a system whose chief merits are that it is a reputation maker for the inventors and that it rejects from education the very corner-stone of business itself. Business is training — at least for the employee — in the virtues; why should not education be the same?

An employee must do as he is told—he must be like McGoggin in Kipling's tale, "obey orders and keep abreast of the files"—

yes, more, for the most part he must know what to do without being told. In the foundry or freight yard there is no sweet-voiced, gentle teacher to stand over him and safely guide him in his every operation, to chide him gently when he is careless or makes a mistake, and to laud him extravagantly over the first signs of a trivial success. Our schools are too free from drudgery and pupils are trained, not to burdensome memory work or weary repetition, but rather to the play idea. Much of their work is turned into play for them that they may perform it without knowing that they are working, just as bitter medicines are sugar-coated that the patient may swallow them without the slightest discomfort. But there is no way in which the book-keeper can sugar-coat for himself the addition of a column of figures, or by which the salesman can avoid the bitterness of the insult heaped upon him by some discourteous buyer. Education should be, partly at least, in the experiences of this world, not of the next.

Last of all it may be well asked what right any part of our people has to demand that education give a limited special training to make servants for corporations or small shops. The end of education is not serfdom, even of the most enlightened and agreeable sort, but rather the development of intelligent men and women trained for whatever work they are called upon to undertake. In our schools we are not to produce blind Samsons to labor at the mills.

More than ever before, education is called upon to save children from themselves; for in the enriching of our courses of study temptations to follow false gods have crept in. Now that children in the child-garden and lower schools are trained to strange ideas of work and freedom, and are promoted to our higher schools, teachers find themselves confronted with a new and insidious desire on the part of many students to evade arduous mental labor. These students measure their effectiveness by what they can do — paper-cutting or sled-making — not by their mental capacity. A boy in study hours begs his teacher for some manual work, that he may avoid struggling with a proposition in geometry. He looks forward to a period in the

drawing class or shop, and dreads all purely mental exertion. He is thereby training himself to some purely mechanical art at the expense of his knowledge of men, things, and their relations. Thus he places himself at the mercy of the thinker, the capitalist, let us say, who becomes his master. He must be turned from these pleasing pursuits to the arduous pursuit of truth, that he may be free. And this can be done best by cultivating his intellect with broadening studies.

EDWARD MANLEY.

NEW TRIER TOWNSHIP HIGH SCHOOL,
Kenilworth, Ill.

HISTORY IN THE CURRICULUM OF THE COMMERCIAL HIGH SCHOOL.[1]

ANY treatment of the topic assigned to me must take into account two notable reports on historical studies in secondary schools: that of the subcommittee of the Committee of Ten, known as the "Madison Conference Report" (1892), and that of the Committee of Seven of the American Historical Association (1898).

The reports just noted include some discussion of the civil government and political economy. It has not been thought wise, however, to introduce any treatment of these subjects in the present paper; they are deemed of sufficient importance for commercial work to warrant an independent discussion of them. The report of the Madison Conference also includes recommendations concerning historical work in the elementary schools; it does not seem advisable to introduce the elementary-school problem in this connection.

The recommendation of the Committee of Ten subcommittee is for a study of Greek, Roman, English, American, and French history, with one year to be devoted to the intensive study of some period. It recommends that European history be taught in connection with the history of England and France, or in the final year of intensive study. This committee favors the pursuing of historical studies continuously through the four years of the high-school course.

The Committee of Seven also recommends for four years of continuous historical study in the high school as follows: one year of ancient history, dealing with Greece and Rome principally, but also including some account of the oriental nations. It further favors taking in connection with the ancient history, the Middle Ages to the early ninth century. The committee recommends for the second year, general European his-

[1] Read before the Business Section of the National Educational Association, Boston.

tory from the early ninth century to the present time; for the third year, English history; and for the fourth, American history (and civil government). In a supplementary suggestion this committee advises that, if but three years can be secured for historical study, general European history be omitted, and English history be so treated as to include the most important phases of the continental history parallel with it.

On the basis of the above reports, as well as from the experience in commercial schools, I make the following recommendation for history in the curriculum of high schools of commerce. Four years should be devoted to the subject: first, general history to *circa* 800 A.D.; second, English history, including the main movements in the history of continental Europe; third, American history; and fourth, a general history of commerce. It is believed that this division will give at once the most rational general survey of the historical field and the best practical results that can be secured from the study of history in commercial schools.

Various explanations have been given for arrangements of historical studies different from that above indicated. One principal of a commercial high school justifies taking English history before the ancient, with the argument that English history has the greater practical value, and as the larger number of students are in the first year, they should be given the subject having the greater value. I doubt if the first premise on which this reasoning is based is sound. If students are to be but one year in school, they will probably get a better educational result from a study of ancient history than could be had from a study of English history without the ancient as a foundation. In any event, the reasoning is specious, and if adopted would lead to furnishing the narrowly technical short course.

Others have urged the teaching of the history of commerce in connection with general history, on the ground that by such an arrangement repetitions would be saved and this division of the subject brought into its proper relations to history as a whole. This suggestion sounds plausible, but I believe there are practical difficulties in carrying it into effect.

History may be considered as a texture into which there are woven many threads. We cannot undertake to say how many of these there are, or to what extent they may be singled out. Among the more generally recognized threads of interest in history are: political and constitutional, military, church, and economic history. The history of commerce is a branch of the latter. It would be a mistake for the student of commerce to try to follow the thread of his interest without some knowledge of the whole of which it is a part. Similarly, it would be unfair to deny him the privilege of following this thread when he has been prepared to do so. This should be to the commercial schools the year of intensive study; it may, however, be devoted to one topic extending over a wide period, rather than to many topics for a briefer period.

The history of commerce should serve as the vocational study of history for commercial schools. It should occupy in its special schools the place occupied by the history of education in schools of education, church history in theological seminaries, the history of law in law schools, and military and naval history in the academies devoted to the education of soldiers and sailors. In these several treatments of history, each has "a different thread to disentangle from the great coil . . . . facts that are principal to one are often minor to another." Students in commercial schools should single out the phase of history dealing with their special work and study it, not lost in the mazes of other interests, but as a distinct thing.

I am not favorable to making history an elective subject. It has for the high school of commerce a cultural and practical value that warrants its being made required work for the four years of the course. The Committee of Nine of this section may think it wise to offer an election in the fourth year between the general history of commerce and a more intensive study of modern commercial history. I am frank to say that I incline to the general course.

There are reasons for the preference just expressed that grow out of a consideration of the recommendation made at the opening of this paper. For classical and English high schools we

may well question the wisdom of the Committee of Seven's recommendation covering the scope and method of treatment of the ancient period. But with a general sketch of the history of commerce it will be possible to overcome disabilities that might arise from a bad division of subject-matter and an improper relation of parts. Again, the general sketch can give the proper historical perspective that might be lost from the omission of European history. Anyone who has taught the history of Europe in connection with the history of England will understand what I mean when I say there is danger that the student will regard the history of continental nations as a mere tail to the English history's kite. The history of commerce will show perhaps better than any other division of history that England was influenced far more by the continent of Europe than was the continent by England. Thus the history of commerce furnishes at once the means of historical review and the principles of sound interpretation for history as a whole.

Concerning the time requirement, I would suggest that, if possible, three hours a week should be devoted to history throughout the four years of the commercial high-school course. If it is thought wise to take the subject as a half-year one, five hours a week at least should be given to it for four half-years.

I am asked to treat especially the *value* of historical studies in commercial schools. The value of history in general is well recognized; this phase of the subject has been ably handled in the two reports mentioned at the opening of this paper, as well as in several recent books on the study and teaching of history. I shall not take time, therefore, to discuss the general phases of the subject. It may be worth while to remark in passing that the history taught in the secondary school is largely a matter of selection from the ample and readily accessible material. Now it seems wise for commercial schools to select for the first three years those phases of the subject that will best prepare for the fourth year's work.

The writing and interpretation of history are influenced consciously and unconsciously by the period in which it is written or interpreted. The present distinctively economic age is having

its effect alike on the interpretation of old historical writings and the production of new ones. We may congratulate ourselves that both our authors and text-book compilers are giving economic history its proper place in relation to constitutional, military, church, and other phases of historical writing. Industry and commerce are claiming new attention in general history, and from what has been termed a "melancholy record of human crimes and calamities" history thus passes to be the "animating register" of the industry and ingenuity of men. With the change in point of view from military to economic history, there is less attention to the ways in which men are killed and more to the ways in which they are kept alive. There are special advantages in the economic interpretation of general history. More than any other branch of the subject, it contributes to correct notions of the unity of all history. Economic history deals with the basal needs of men, for food, clothing, and shelter, and these have been much the same in all ages. Teachers in commercial schools will not be slow to recognize the advantages that will come from a study of history in which the economic aspects of the subject have been given their proper setting.

It remains to speak further of the value of the special history recommended for the fourth year. This is the distinctively vocational subject in the historical group. Its highest, though by no means its sole, function is in the orientation it gives the student before he takes up his calling. Every commercial man should find the highest pleasure and usefulness in his work. Knowledge of the past of any worthy calling ennobles its present, and makes for its future. The business man can ill afford to be cut off from a knowledge of the development of the field of his activity. It smacks of cant to say that an acquaintance with the history of commerce will make of the man of commerce at once a better man and a better commercial man, but it needs to be said.

The above statement is true because the history of commerce shows the business man his true place in relation to the phenomena with which he deals. To carry on a calling to best advantage one should know what those who preceded him did,

and where they left off. Two ends will be served by such knowledge on the part of those in commercial life : it will make them more humble, and it will exalt and dignify their work. Many of the self-important business men of the present should learn that they are only inheritors from the work of other men, Scarce a business custom but is rooted in the past, and many of them come from the remote past. Present commercial life cannot be cut off from its past, and business men should recognize that they enter into the heritage of other men's labor.

But familiarity with the lives of great merchants and knowledge of the accomplishment of other commercial people and times will do more than to make business men humble. It will stimulate and encourage them. In the grind of daily toil, one needs to be lifted up with the thought that he is not the be-all and the end-all, the alpha and the omega of his work. A conscientious minister of the gospel said to me recently that he found great comfort in the doctrine of evolution. When pressed for an explanation, he said that he saw so little direct result from his labor that he could not carry it on unless he was encouraged with the thought of an ultimate result to which he was contributing. The business man, too, will be encouraged to feel that there are within the realm of his work ultimate worthy ends to the reaching of which he may contribute. The division of commercial history into ancient, mediæval, and modern is misleading. We can say of all these divisions, as Dr. Arnold said of the sixth and seventh books of Thucydides, they are modern history.

With a proper study of the history of commerce, it becomes to the present economic age what Lecky termed political history, a great searchlight on the deck of a ship, illuming the path over which the ship has passed and casting its beams forward to define a future cause. There are many advantages from a study of the history of commerce, but if it do nothing else than to give to future business men a proper attitude toward their work, it will have a value second to no other subject of the curriculum.

I am fully aware that there are differences among us as to what are the essentials in the history of commerce, as there would be in trying to determine the essentials in almost any

other subject. Commercial history is too new and indefinite for a profitable discussion of this phase of the subject. To me the most vitally important thing about this, as about any other branch of history, is that it shall connect the present with the past. In our teaching the present may be made to call back to the past, or the past to call forward to the present. It is "the duty of every generation to gather up its inheritance and thus to serve the present and prepare better things for the future."

"Yet I doubt not thro' the ages one increasing purpose runs
And the thoughts of men are widened with the process of the suns."

CHEESMAN A. HERRICK.

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SCIENCE IN COMMERCIAL WORK: ITS PRACTICAL VALUE, CHARACTER, AND PLACE IN HIGH-SCHOOL WORK.

THE course of study of any high school should be along broad lines. Courses of study should be fitted to the pupil, and not the pupil to the courses of study. Although earning a living is one of the primary aims of everyone, and although of those who attend the high school nearly all follow commercial pursuits, the aim of any course is to start the pupil on the way to an education. In framing such a course, there is little to guide us; for, while the school programs of France and Germany are suggestive, it must be borne in mind that the boys of those countries are in many ways unlike the American boy. With them the school is the main end of their life, is a business—a serious business. The text-book, assimilated by the memory under pressure (there is comparatively little laboratory work in any subject), and a complete devotion to the school account for the apparently rapid advancement of the French or German boy. A widely traveled French engineer, M. Jules Picard, after a long residence in this country, remarked that the American student at twenty is two years behind the French student of the same age; at forty, the Frenchman is far behind the American.

Almost everything, from wearing apparel to heavy machinery, is made to order in Europe, and, because of the low cost of labor and the high standard of skill in hand-work, at prices that defy competition. We manufacture; and in manufacturing alone, and not in making to order, can we compete with the European. There are a few things we need to imitate in their business and manufacturing methods. The commercial supremacy of the German in many lines of business is in part due to the earnest way in which the business man prepares himself for his work.

The system of election in studies is with us an accepted fact, and election by subjects is growing more in favor than election

by courses. In election by courses the opportunity for selection comes early in school life; in election by subjects the opportunities for exercising a choice increases year by year. The separation of a high-school system into English, classical, manual training, and commercial schools forces the child of fourteen, or his parents, to choose a course in which there is comparatively little election. If the commercial high school is not large enough to include a great variety of subjects, there should be considerable flexibility in changing from one school to another. There can be no true election without such flexibility. Boys at work develop tastes for different lines of business; and boys at school should be given opportunity to change their direction without returning to the port from which they started.

School programs, good ones at least, grow and are not manufactured. The times change, and our program of study must change with them. While there are certain principles that must be kept in view in laying out courses of study, the final test must, as in everything else, be sought for in the results produced. There has been an almost total lack of intentional experimentation with school programs. The great variety we have today has come from the desire to find the final and best course, rather than to establish different courses and to study and observe the results. We may assume that courses, and the subject-matter taught in them, will change more rapidly in the future than in the past. Experiments are best made in the upper classes. Almost all the enrichment of the secondary schools has been introduced in the colleges, and then put earlier and earlier in the course.

The method of science instruction, as well as the content, must be considered. What can be taught is more or less influenced by the method of presentation. The method of teaching one pupil at a time, known as individualism, is much more common in science than in other branches. Individualism in science requires the rotation order of laboratory exercises. It is enough to say of this that all teachers who follow this plan seem themselves doubtful of the value of laboratory work. Individualism has proved itself of use in the commercial college, where,

accompanied with much class work, it was used years ago. If individualism means, as it does in the commercial college, that a pupil must attain a certain standard of proficiency, then individualism should be a part of our system of secondary education. This certain standard is the one which, for the chosen profession in life and for the successful progress in the same study or in allied subjects, is the best; for there is, we must remember, such a thing as over-learning. Individualism is here considered as a standard below which a pupil must not fall, and this standard will vary according to the pupil and the use to which his knowledge and training is to be applied in school or in after-life, rather than as a license for the pupil to go his own gait. Let the rapid pupil find work in a large number of subjects, rather than in an increased rate of progress in any one. At the secondary-school age, as at perhaps any stage in life, a lapse of time must be allowed for that unconscious mental cerebration that makes knowledge and acquired skill a part of our own being.

The success of science-teaching depends on the co-operation of other departments: co-operation of the modern-language department, by teaching scientific French and German; of the English department, in dictation and notebook records; of the art department in the use of drawings, diagrams, and lettering, and the general attractive and self-explanatory appearance of the notebook pages; of the manual-training department, in the construction of models and apparatus. In the same way, instruction in science should be helpful to the commercial branches.

The reform in mathematical teaching is well under way. The simpler and more practical teaching of mathematics, in part using the work in science for concrete work, might be tried in commercial high schools, unhindered by tradition and college-entrance requirements. It is recognized that a much less theoretical knowledge of algebra, geometry, and trigonometry than is current today would be helpful in science-teaching. Much of plane geometry, as far as inscribed angles, might be assumed. Interest in formal demonstration is fully aroused when we prove something that is not at all obvious. Is any principle of business

violated if the pupil's attention is called to the fact that one, and only one, perpendicular can be drawn from a point to a line? Examples and problems might bring out important facts: that the power of the tides everywhere, and solar engines in most places, is more expensive than power from steam or gas engines; that wherever the barometer is low, as on the elevated plateaus of the West, air compressors work less efficiently, and the addition of a condenser to a steam engine gives less economy, than at the sea level.

Science should be studied as a whole, and not as if composed of unrelated branches. There has been too much separation of physics and chemistry. There is no neutral zone. Portions of physics—electrolysis, batteries, energy of combustion—are just the places where a little time is well spent on chemical theory and chemical experiments. Chemistry without some knowledge of density, methods of electrical measurement, and the whole subject of heat, is at times unintelligible. Chemistry, physics, biology, and physical geography are difficult subjects. It is impossible to make them easy and at the same time valuable as training or information. Science should not be a playground or an asylum for the lazy, the mentally weak, or those who cannot or will not learn languages and mathematics. A fact to be of use to a business man must not be associated with the particular branch in which it is usually taught. If the pupil learns that different countries have different climates, he should not, as did Lord Timothy Dexter, of Newburyport, send warming pans to the West Indies; the fact that this proved a profitable venture, because they were used as molasses strainers, was only an unusual case of good luck.

The course in science should have in each year such portions of each branch of science as are supposed to be adapted to the progress of the pupil—a spiral arrangement, each year going farther into and taking up the more difficult portions of each subject. Physics, chemistry, meteorology, physical geography, and biology, including quantitative laboratory work, would then form a part of each year's course. Chemistry should be taught from the energy standpoint. Even if cadmium is omitted, teach

something about tungsten, titanium, and molybdenum; for these by no means rare metals, with iron free from carbon, form alloys that hold an edge at a red heat. By their use iron and steel will be worked from two to five times as fast as before. The new abrasive, and other products of the electric furnace and electrochemical processes of manufacture, enough blowpipe work in the determination of minerals to get a comprehension of how this work is done, and other work of a practical nature, should be included in the course. The manufacture of a few chemicals, keeping a careful account (perhaps with the co-operation of the bookkeeping department) of the cost of raw materials, rent, labor, depreciation of apparatus—an item brought home to the student by the laboratory fee and breakage bill—gives an idea of what is known to manufacturers as "costing." The construction and cost of producing electric current from galvanic cells, as determined by actual tests, show how inefficient zinc is as fuel for generating power in large amounts; the measurement and calculation of the horse-power of engines and motors, and practice with the photometer, are good preventives of the craze for perpetual motion. There is no place for Aladdin's lamp in the business world. The millions that are wasted yearly in foolish ventures, which would not be considered for a moment by anyone who had studied science and had an idea of the laws of conservation of energy, would, if turned into the channels of legitimate business, make America the foremost commercial nation in the world.

The work in science should be practical. In specific gravity, weigh something besides blocks: take the native rocks, specimens of minerals, coal, the common metals, and wood in common use. In heat, learn the names and uses of actual working instruments — the pyrometer, ecometer, safety valves, calorimeter — always using the commercial names of things. Study the catalogues of trade supply houses, plumbers, and steam-fitters, the trade journals and scientific magazines, and consular reports. Call attention to the economic value of inventions, and the way we do things now as compared with a century ago, when there were few time-saving machines. The sources of supply of raw

materials, wood, lumber, minerals, fuel, and available tillable land are the stock in trade of the world. We should work for the intelligent management of forests, and for the economical use of fuels and ores. The climate, natural resources, and accessibility of each section should be taught together. Is it not better to know the boundaries of the coal and iron fields than of the states? to have on the mental map we form of a country the obstacles to commercial intercourse, the rainfall and climatic conditions, than the dividing lines of towns and counties? Does the botany we teach make a pupil eager to reforest land, plant fruit trees, and cultivate food plants? Does zoölogy inspire a pupil to do his little part in mitigating the mosquito plague; in destroying injurious and in cultivating beneficial insects? The meteorology we learn ought to make us satisfied with the weather we have and contented with our surroundings.

The business man or engineer must use his knowledge in the big and little emergencies of business life. It is perhaps just here that education for culture alone differs from a commercial or technical training. A culture knowledge includes a large amount of information, most of which is not at one's tongue's end—a *reminiscence*, as Plato calls it; while the business or professional man has a ready knowledge, or cognition, of his particular calling. Those who hold our fortunes and our lives in their keeping must have more exact knowledge than the accepted standard of culture demands. Absolute ignorance frankly admitted is far better than the vague knowledge of material processes and business method that makes a man think he knows when he does not. He must learn to inquire when in doubt, and to use every source of information. The lesson of the message to Garcia has been overdrawn. A man may be admired for his pluck and persistence; but fortune falls to the lot of him who informs himself thoroughly.

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MATHEMATICS IN COMMERCIAL WORK.

THERE is need, at intervals, in most general courses of study, to rediscover mathematics; to determine, again and again, in the light of the best thought and method of the time, its educative, disciplinary, and purely utilitarian value, its place in the course, its subject-matter.

With a wealth of new matter in pure and applied science, admirably developed, constantly demanding an increasing weight in overburdened curricula, mathematics has been relegated, at times, to a less important position than formerly. No doubt this is right in some cases; in others, it follows from a failure to realize fully its possibilities of development. In the larger scientific and engineering schools alone has it retained, noticeably, relative weight, because it has been seen to be the bed-rock on which, to a large degree, the superstructure of technical training must be built.

In our modern secondary schools of commerce, however, we need not to rediscover, but to discover, mathematics, in the light of the purpose of the school. Content that secondary algebra and geometry, plus utilitarian commercial arithmetic, should constitute the commercial course in mathematics, we are only beginning to realize the possibilities of correlation with other subjects, and of a distinctive selection and treatment of the subject-matter that shall be highly educative throughout, while strongly utilitarian in parts.

These subjects, commonly required, are not new, and no new ones should be introduced, although opportunities should be given in the final year for electives of a higher order. But the standard subjects should be commercialized, to a slight degree at least, where this is possible without decreasing the efficiency resulting from a realization of the full educational and disciplinary value as a natural complement to the purely utilitarian.

Furthermore, the steps of development must be natural and progressive, each giving power to master the next. Mathemat-

ics must not be presented ready-made. The individual must make his own as the race has done; not, however, as if the race had never done it. While preventing waste of energy, the amount given by authority of teacher or book must be reduced to a minimum.

That which is distinctively utilitarian in the course must be thoroughly practical and in accord with modern usage. Business arithmetic especially is undergoing marked changes in system and development. The arithmetic of today in method and application is not that of a late yesterday.

Educationally, the greater value as to results must come from those parts which appeal to the pupil's life, activities, and interests. Mathematics should be, as far as possible, live and not dead matter. The arithmetic we know is the outcome of daily needs in every phase of life; the other branches may touch life at many points. And in this close contact, interest will start and flourish. "The mainspring of mathematical ability in a race is the attempt to adjust means accurately and economically to a given end."

As a whole, the course must give power, vigor, and strength to the mind; cultivating clear thinking, and ability to see all sides of a question; developing that individual capacity which is needed in every form of mental activity. A magnificent exercise in logic, it may sacrifice, at times, the teaching of facts, if it only gives power to prove facts.

In the light of these requirements, commercial arithmetic must be abridged by cutting off obsolete subjects and complicated methods; and enriched, by increasing greatly the quantity of simple calculation, and of modern, practical, concrete problems, especially those that deal with our active participation in life. Although business grows steadily more complex, details of organization and methods of work tend steadily toward simplicity.

This tendency results in increased demands for accuracy in fundamental processes of arithmetic, and for a working knowledge of the principles of percentage, and of elementary business principles, with ability to apply them in an increasing number of

ways. The arithmetic of actual business is suggestive, when studied at close range. It discloses:

1. That common fractions are uncommon, those with denominators of two, three, four, six, and eight alone finding extended use. For others, the nearest two-place decimal is the common substitute.

2. That quantities are generally expressed in one or two denominations. The merchant sells 1¾ yards; not 1 yard, 2 feet, 3 inches; the grocer, 1½ lbs.; not 1 pound, 8 ounces; the engineer measures in feet and hundreds of feet—a decimal system—not in feet and rods.

3. That the majority of numbers expressing quantity and value are exceedingly simple. It follows naturally that ability to work mentally should be cultivated, even if the volume of modern business did not demand it. Employees waste time, energy, and frequently costly stationery on unnecessary paper calculations. Yet mental calculation, once a habit, is always easier.

4. That in actual business there is little recognition of text-book case or subject. A single real estate problem may involve simple percentage, taxes, commission, insurance, interest. Solutions must rest on the bed-rock of fundamental principles, not on the shifting sands of arbitrary cases.

5. That actual problems are frequently so expressed as to make essential ability to see as well as to solve them. A book says: "I bought 40 chairs @ $8.40, less 15 per cent discount, paying freight of $11.20. Terms: 30 days; 2 per cent cash. I paid cash. Find the marked price to gain 15 per cent." A similar problem I overheard expressed in these words from dealer to clerk:

"John, we want to clear 15 per cent on this invoice!"—handing him a bill. And John noted terms, discounts, prices, allowed for freight and store burden, and marked his chairs. The employer says: "Do this!" The clerk must make the problem and find or select the values necessary for its solution.

6. That calculation tables for interest, discount, insurance, taxes, wages, earthwork, etc., are commonly used to save time and insure accuracy.

7. That the use of ruled forms, many requiring extensions and calculations for which text-book courses do not prepare, is increasing rapidly.

The course in arithmetic now, to meet business and educational requirements, must be woven together by mental exercises. These may average, to advantage, one-half the recitation periods. Mental calculation finds its first field in rapid reviews of fundamental processes in whole numbers and in common and decimal fractions; its second, in exercises in numbers under 100, continued throughout the course, and in percentage and interest, all intended to develop speed, accuracy, and knowledge of number combinations. It is the tool for systematic review and for developing shorthand arithmetic. Ready-made short methods must be handled with exceeding care. There is danger that they will go off the wrong way, or at the wrong time, or — not go off at all. But those developed instinctively by the pupil, through increasing knowledge of number in combination, remain with him — a valuable business capital.

Moreover, every practical topic may be introduced and developed through brief, pointed mental problems; and drill secured by a series of related mental problems; a series with the same central idea; a statement or value on the board, around which exercises may be woven, permitting the pupil to concentrate attention solely on the new points involved.

In close co-ordination with the mental work, the written exercises and test problems "clinch" the subject. These should be brief, practical, living questions, at times expressed in memoranda or bill form, in order that the problem may be determined as well as solved; at times, grouped to relate to the same business, or business condition, for related problems have far more educational value than those having simply the arbitrary connection of the text-book case.

But from arithmetic principles and terms, in combination with business terms and forms, has been evolved a business language in which business transactions are expressed and business records written. Its literature consists of notes, drafts, bills, estimates, books of records; its phraseology of symbols, business expres-

sions, terms, forms of tabulation. Some knowledge of it the pupil gains from his bookkeeping, but it is acquired more effectively through applied arithmetic, which should form the next step in the mathematical course.

Commence with sales and order sheets, requiring horizontal and vertical addition; follow with carefully graded bills of different businesses, reading and solving the problems involved, studying the meaning and relative value of "terms" and the essentials of form. One wholesale bill, with discounts and choice of terms, contains several "pages worth" of text-book problems. Master, then, commission forms; use actual notes for interest, discount, and partial payments. Solve office paper, pay-rolls, requisitions, inventories — the field of arithmetic as recorded in business paper. At every step, too, require the preparation of original paper, having it checked and audited by the class.

Finally, later in the course, when the pupil has gained strength of mind, breadth of outlook, and a knowledge of business conditions, study in detail some of the greater problems based on arithmetic. Those of banking and finance, of insurance, annuities and endowments, of taxation and duties; the use and proper design of working tables; the effective preparation of statistics, the great problems of "cost-keeping" and factory mathematics. Here, in its highest phase, arithmetic may touch and interpret the work of most other departments of the school.

The course, thus outlined in salient points, is highly utilitarian, yet, when one has taught it, he finds it just as highly educational, The pupil, made wide-awake, finds suggestive problems and illustrations, which the competent teacher directs to emphasizing the main points under discussion, in his elementary law, commercial geography and bookkeeping, and in active life.

The principle of fair settlement, which underlies so many business arithmetic processes, and other business and ethical principles, are constantly emphasized. The unusual opportunities for individual and original work bring breadth of mind and training in system, form, and arrangement; while class discussions and rigid analyses give ability to judge before solving, to reason accurately, and to do away with that inaccuracy of statement which is the parent of inaccuracy of thought.

Algebra is not taught, distinctively, for its utility to the coming merchant, although to the mathematician and to the engineer it is indispensable. Its greater value is as an exercise in applied logic, where it gives character to the teacher's work and raises it to the plane of true education. A source of mind-power, it develops capacity to master subjects of kindred, or of totally different, nature.

Algebra, in part, is distinctively universal arithmetic, and the two subjects work well in double harness. Elementary algebra and arithmetic, in combination, should precede commercial arithmetic, for the methods of algebraic reasoning aid in mastering arithmetical problems, the method of equation solving easily what is otherwise difficult. This suggests, also, the substitution of practical business arithmetic, problems for the many objectionable applied exercises in algebra, now in print.

A scientific treatment of the subject should lead from the beginning to the equation, which should be introduced early, and emphasized, until the pupil is familiar with the principles on which the processes of operation are based. Factoring and its relation to equations and fractions should also be a strong feature. In work of this class the mental exercises should develop the same accuracy and facility in handling the literal as later the numerical. In all stages of the work methods of checking solutions are important in cultivating a valuable business habit, and in encouraging independence as well.

That part of higher algebra, less distinctively universal arithmetic, covering the theories of combinations and probabilities has also sufficient value, from practical and disciplinary standpoints, to warrant its rigid treatment. On problems of life insurance and in studies of various business conditions, it will be found to have direct bearing.

Geometry claims place especially because of its value as an exercise in formal logic, although in parts, in mensuration for example, it has high utilitarian value. In class it is often effectively taught as a combination of the inventional and the demonstrative. The inventional, leading to a right conception of the truths to be established, introduces naturally the deductive

method of establishing them. Elementary ideas of logic, however, may be introduced from the beginning, and demonstrations made exceedingly rigid — with the rigor consisting in soundness of structural development, as well as in clearness and effectiveness of expression.

The field of demonstrative work should include plane geometry and the principal theorems of solid, many of the latter having unusual disciplinary value.

The field of applied work should be as broad as time allows, for here is possible correlation with other subjects, and contact with actual life. The practical problems of mensuration, the preparation of plans and estimates, designing, pattern-making, the geometrical representation of statistics, suggest lines of development.

The value of geometry is measured, to an unusual degree, in terms of the teacher. His insistence on rigid demonstration and clear statement, especially in oral work, and on neat, accurate, effective figures; his method of expression before the class; his choice of original exercises for assignment at every stage of the work; his methods of review, measure the value of geometry to discipline the mind, to arouse interest, to inculcate habits of neatness, order, diligence, honesty.

The final year should offer opportunities for advanced elective work, consisting principally of trigonometry, or of problems relating to heat, light, and power, with which many business men need familiarity, but preferably of descriptive geometry. From experience with classes in this latter subject, I regard it as the most attractive subject-matter mathematics has to offer. As a theoretical subject it has no mathematical equal in arousing general class interest, while it develops a high degree of mind-power. Its applications, in practice, also, cover an exceedingly broad and interesting field. The Committee of Ten, speaking of projective geometry, which includes descriptive, says:

> It is astonishing that this subject should be so generally ignored, for mathematics offers nothing more attractive. It possesses the concreteness of the ancient geometry without the tedious particularity, and the power of the analytical without the reckoning, and by the beauty of its ideas and methods,

illustrates the æsthetic quality which is the charm of the higher mathematics, but which the elementary mathematics, in general, lacks.

Although little has been said directly, enough has been suggested to show the natural order of the subjects. Details of exact order, and of number of recitations, must depend on the other courses of the school, with which the mathematical work must be properly co-ordinated. It is safe to add, however, that in a time no greater than, and more probably less than, the average period devoted to the other major subjects, mathematics may claim, if properly treated, at least equal weight with these in progressively expanding the interests and powers of the pupil, in training him to think clearly, to plan, to organize, to see relations; in developing the broad active man of affairs.

But this requires the right man behind the mathematics!

"It would be a good thing," reads a rule of the Franke Institute, laid down two centuries ago for the guidance of teachers, "if the teacher would himself work through the book so that he could help the children. It would be a good thing today, if the teacher would read deeply in the living book of his subject, in the book also, of business life and activity. A broad man, he should understand the purpose and principles of the other subjects of the curriculum, drawing inspiration and illustration from them, yet be ever sharpened to a mathematical point.

ERNEST LAWTON THURSTON.

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COMMERCIAL GEOGRAPHY—THE NEW SCIENCE.[1]

DURING one of the campaigns of Napoleon a curious event is said to have occurred. The emperor had been absent at Paris for a long time and the troops on the frontier had grown inactive. Suddenly, without any apparent cause, the troops began to work with feverish activity at their ordinary tasks. The officers shared in their enthusiasm, but were unable to see a cause for it. The excitement lasted a day and a night, and on the second day the news spread that Napoleon had arrived during the night quietly and unannounced. It appeared then that the mere presence of that great leader had inspired the troops along the frontier, though they did not know of his arrival.

So during the last twenty years a new movement has arisen in education. Old systems of training and long accepted standards have suddenly become unsatisfactory and have been thrown aside. New methods of teaching old studies, new ideas of the purpose of education, new activities—as the kindergarten, manual training, the elective system, laboratory methods—have swept over the school world with a speed and force that even their most earnest supporters have been unable to explain and which their opponents have believed would destroy the entire system of sound and thorough education.

Today I believe that the cause of this sudden and far-reaching impulse can be seen; that the new force which has compelled this new and vigorous life is apparent, and the leader in the new education has taken command—a power soon to be gladly known and obeyed. This new force is the modern idea that *the thinker must also be the doer;* that faith, however lofty, without works cannot lift mankind; and that the dreams of the student in his library must be tested by the sturdy workman in the workshop before they can lead the world. The application of this force may well be called, "the science of practical life,"

[1] Read at the meeting of the Business Section of the National Educational Association, Boston.

or in a more correct title, "the science of commerce and industry," commonly called "commercial geography." It is to call your attention to the nature of this science and its place in the schools that I have the privilege of speaking to you this morning. I would say, in passing, that I was a defender of the classics, with Greek as my special study, and I still believe the classics are necessary for a ripe, literary culture; but I have come to believe that for most men other studies are of more importance in the practical world of today.

The subject of commercial geography was put into the schools without a very clear idea of what it really was. A professor of physical geography said a few months ago: "What is commercial geography? I don't know." And a high-school master said to a pupil: "You can get all there is in commercial geography by a few hours reading out of school." These two remarks express the usual thoughts of teachers on this subject. In the few minutes at my disposal, I must state certain facts in a dogmatic way, but each is the result of careful study and experiment for the last four years, the space of a college course.

The science of commerce and industry, as the subject should be called, deals with several branches of study:

1. The study of commercial staples, as wheat, cotton, lumber, etc., from raw materials through manufacturing processes, to the finished products.

2. The ways by which these products are transported by sea and land over the world to the consumer.

3. The mechanism of trade, as banks, credit, clearing houses, markets, by which the great masses of productions are handled and the money in payment for them returned to the producer.

4. The comparative study of the nations with regard to their productions and commercial importance in the world.

This is exactly what commercial geography is, and to this topic the name should be restricted, and the broader title of "commerce and industry" should take its place.

5. The history of commerce and industry, so ably discussed by Dr. Herrick yesterday, showing how the conquests of work

in spite of the conquests of war, have made the epochs of civilization.

6. The economics of industry, which show the position of man in regard to productions, commerce, and trade, and how they are essential to his welfare and happiness.

The subject of commerce and industry is a science, with laws as precise and unerring as chemistry, botany, or physics. It may be called a "master of sciences," for its scope is wider and includes the others. For example, chemistry and physics deal with things and forces by themselves; commerce and industry, with things and forces as applied to the needs and uses of man. In the study of wheat, botany shows the growth of the plant; chemistry, the nature of the soils and the food-substances in the grain; the transportation and milling of wheat demand the sciences of engineering and physics; the marketing and payment, the science of finance; the effect of wheat on the body, the science of physiology; six sciences for a single thing. Then comes the master science of commerce and industry and, having the reports of the subordinate sciences, itself shows how men use wheat for their labor, food, and civilization. So is it with the other commercial staples and industries.

The question that naturally suggests itself is: What is the educational value of the subject? Does it tend to a higher culture, or is it merely a technical knowledge which serves only the ends of trade? If it is a science, as I claim, the subject is answered, for all science study is cultural. As I see the effect of this study on the pupil, I am convinced that—

1. It develops the power of precise observation by the study of natural processes.

2. It rouses and holds the interest of even the dullest pupil, because he deals with real things in a natural way.

3. It develops the reason by the study of causes and their results.

4. It stimulates the imagination by the learning of great numbers of men employed in human labor, immense masses of material to be handled, and the engineering skill and daring required which thrill and fascinate the mind.

5. It broadens the mind by the study of other nations, their life and trade, and destroys the narrow, dangerous self-content of local pride.

6. It strengthens the memory by constant use as a child naturally learns, the content being of interest to him.

7. It creates a respect for the study, a respect that men feel for lightning, a waterfall, or a dynamo. This comes because the pupil feels the knowledge to be real, vital, and so vast as to be impressive.

8. It matures the judgment from the necessity of deciding between methods in business, and so brings real wisdom, the fruit of experience.

9. It excites ambition and creates enthusiasm by showing laurels to be won, difficulties to be mastered, secrets to be wrested from nature which demand the highest skill, the most trained experience, the most persevering will; and a study that does these things is certainly cultural.

Commercial geography was given a place in the curriculum of the school a few years ago to satisfy a popular demand for practical education and business training. With the common demand that a boy be taught only what he will use in business I have no sympathy at all. For the demand that he shall be taught what will be of practical use in life as well as in school I have respect. Something is vitally wrong when the high-school graduate is less valuable when he goes to work than his former classmate in the grammar school who began work four years before. When the subject was introduced, it was given an hour or so a week, joined with other studies, deemed of little use; school boards did not know what to do with it; teachers were not trained to teach it; materials were not at hand or methods devised; no text-books were ready. These conditions have not entirely passed away, but they are changing with wonderful swiftness. It is like the ugly duckling, still sneered at, kicked about, abused, and tormented by the ducks and by the hens, and accused of being too big and awkward. But you will remember that when his wings were grown he flew far beyond his tormentors—a great, white, shining, splendid swan. Busi-

ness men grow enthusiastic over the promise to them of valuable results, but this is not technically a business study any more than history, English, or chemistry. It is a general study, and should not be restricted to commercial causes. Every child in the grammar school studies geography. So in the future every pupil in the high schools will study commerce and industry as absolutely necessary for an all-around training, whether he goes to college or to business direct.

In applying this science to the schools there are two points to consider: first, the preparation of the teacher for this work; second, the training of the pupil in the study.

First: The idea that anybody can teach the subject is already becoming: "Who is able and ready to teach it?" The teacher of commerce and industry must be a man of affairs as well as of books. Where now the college student prepares for teaching by studying in normal school or university, the teacher of commerce will turn to actual study in business life. Where a normal graduate now gives his time gladly in school practice, the student of commerce will spend some months in a bank, some months in a great department store, or in some factory where textile fibers are turned into cloth, or in a railroad office where problems of transportation and management are solved. Perhaps also he will follow the construction of some modern office building from foundation to capstone. Does this seem like adding another straw to the overloaded camel of what a teacher must know and do before he can earn his living? Turn from what the writers say to what men in action say and do. Opinions like theological ideas cease to develop and lose their vital force from the moment they are crystallized into creeds or books and become dead history, not living inspiration. Take the time you would spend on books and devote it to the men who make things and the men who sell and transport them. "As the cyclopædia withers, then the world grows more and more." So shall the teacher, with the same effort, in the same time, gain a knowledge that will be incandescent, not a reflected glow. I do not wish unduly to depreciate the value of books; they are valuable as records; but it should be men of commerce first, books last.

I feel like quoting another of Napoleon's terse sayings: "Mass your battalions where the enemy is most in force;" and by that I understand the world of work.

At first, I confess the outlook is bewildering. Like the view from a great mountain peak, it seems infinite—ridge, summit, ravine, forest in endless succession. Little by little the mind clears, and a few great summits appear to which the others are subordinate, and which themselves depend on the one dominant peak. So in the view of human industry it seems a hopeless task for the teacher to do more than grasp a few salient and unrelated facts, curiosities of knowledge, not instruments. We wonder what bond of union have wheat, cotton, leather, paper, steel, the Panama canal, and the roaring of the stock and produce exchanges. Like all great truths, it becomes simple with the magic key. This is the key of use, of aid to man to help his development and minister to his needs. In this light let us consider our points: Wheat, man uses for food, and in the raising it and carrying it and selling it the larger part of mankind find their labor, their living, their happiness; cotton, man needs for clothing; leather, man must have for shoes and harness; on paper, man keeps his records and sends his messages; of steel, man builds his bridges, his railroads, his swift and burden-bearing ships; the Panama canal will cheapen the cost of transportation so that a poor man in Australia can afford to buy a coat, the making of which has enabled the English workman to buy bread for his children in London; the roaring of the stock exchanges is a surface indication of the great forces of trade by which men move the mighty masses of productions and control the powers of industry; and you see men shouting, cheating, and fighting, it may be, but still doing the work and serving their fellow-man.

The thought I wish to make prominent is that the new education is sound in so far as it teaches man to know himself, but first with the body its needs and uses, and then with his mind.

There are few books, as yet, of value for the training of teachers, but Clow's *Commerce* and Thurston's *Industrial and*

Economic History are especially helpful. They are brave pioneers in the new field of work.

The splendid series of text-books published by the Appletons, treating of funds and their uses, the work of Wall street, trust, finance, etc., will enable the teacher to understand more clearly these important phases of financial life and make him more successful in his work.

The next point is the way the study should be taught to the pupil. There are two methods usually followed:

1. The pupil begins with the study of the United States and its products; then England, France, Germany, etc., till the world or the text-book is finished. This method is not scientific and its results are not satisfactory.

2. The "Philadelphia method." In this the pupil begins the study of products by classes or groups, such as are used in the census reports, as mineral products, vegetable products, forest industries, mining, etc. This method is scientific, at least, and in the hands of trained teachers, like Mr. C. A. Herrick and his colleagues in the Central High School of Philadelphia, can be made highly successful. Its weakness lies in the fact that these groups are separate and unrelated and not parts of one great system.

3. The "Boston method." A third method which seems more sound and scientific is the one used in the English High School in Boston. It is as follows: The pupil studies commercial products and human industries from the standpoint of man and the needs of human life. In this way every commercial staple, each form of human labor, takes its place as a part of a harmonious system, the purpose of which is the development of mankind. The idea kept constantly before the mind of the pupil is: "What use is this to man; what does he do with it and by means of it?" Taking the needs of man in the order of their importance, we find he needs first food and drink; then clothing, shelter, fuel, and lights; transportation, mechanical power, minerals, etc. So the pupil studies foods, textiles, fibers, building materials. He begins with foods, and among these the cereals—wheat, corn, rice, etc.—are the most important. The

method of studying wheat will show the method for all. The study covers: the growth, varieties, and method of planting wheat; the way it is reaped, threshed, transported, and stored; the way it is milled, *i. e.*, turned into flour and carried over the world to the consumer; the way it is made into bread, macaroni, and breakfast foods, and sold under varying conditions; the localities in the United States where wheat is grown, and the amount of the crop raised for domestic use or for export; the other nations of the world which are or can be rivals of the United States in wheat-raising, and the nations which furnish the markets for our wheat.

After wheat, the other cereals are studied in the same way; then fruits, nuts, sugar, etc.; then the beef and other animal foods and fish, the dairy products, tea, coffee, and other chief foods. Next comes the subject of textile fibers. Wool, cotton, silk, flax, hemp, etc., are followed from the raw material to the finished fabric, showing, of course, the processes of baling, carding, spinning, weaving; other fabrics used for clothing follow, such as leather, furs, rubber, paper. After textiles the building materials—lumber and its uses, stone, brick, cement, steel, with methods of construction and uses of buildings, bridges, etc. Next fuels and lights, as petroleum, coal, gas, electricity.

Transportation, manufactures, mining, methods of trade, banking, are studied as fully as time will permit. The method is flexible. It will expand to use an hour a day or the student's entire time, or it can be condensed to a couple of hours a week. In dealing with these subjects the commercial value of the product of labor is always kept in mind, and other points are left for further study, if desired, in the courses of chemistry, botany, physics, economics, etc.

Second only to the right method of study in the English high school is the principle that the study of these products must be based upon the observation, handling, and laboratory work upon actual specimens of the substances; in fact, it may almost be said that if the specimens are not at hand, the subject is not studied. While studying from book descriptions the pupil is listless and uninterested, but when studying the actual things

and processes, the pupil is alert, eager, enthusiastic, and the recitation hour seems too short. A collection of specimens, therefore, is absolutely necessary, if this subject is thoroughly taught, and will sometime be recognized as a proper item for expense in schools, as chemical apparatus or books now are. Visits to factories and warehouses have already been begun and will be extended as experience teaches. Teachers in small towns are often better able to form collections than those in cities. Forest woods used in building or manufactures can be gathered by teacher and pupils, as also the building stones; specimens of fine grains, corn, vegetables in growth and fruit will be readily obtained from the farmers. If the town has any manufacturing industry, a complete series of specimens can be obtained for the schools and will be at once useful and valuable. The interest of parents and town will awake, for the practical value of these collections appeals to all, and the teacher will often find that the man whose prize corn or fruit was shown to the school becomes one of the sturdiest supporters of the school appropriation in town meeting.

After the collection of specimens, in point of importance, comes the library of books. First in value and need are the government publications of the United States, such as consular reports, yearbooks of agriculture, census reports, treasury bulletins, maps of Navy Department; and these each school should try to have. Some are free; some must be bought; but there are thousands sent out by Congressmen to their constituents all over the country, and soon thrown away, that might easily be saved if it were known that they were of use. These are the books of constant use for the live teacher and school. The popular magazines of today are filled with the most valuable articles on human industry, and should be gathered and the articles taken out; they can be kept in boxes or drawers like cards in a library catalogue, without further mounting. A magazine which deals with the world of industry and progress in such a manner as that of the *World's Work* ought to have a place in every school. Sunday editions of the newspapers often contain articles of the greatest value written by the foremost men of science

from their own experience. These books and articles can be made easily available by a subject card catalogue of the topics treated, which can be written out by the pupils as part of their work.

Lastly, let us examine the question of text-books. There are very few good ones on the subject of commercial geography, but many are planned by publishers, and within a few years will be issued and supply the immediate need. One thing is sure: The subject is so new that the book of today will not suit the needs of ten years hence without severe revision, for hundreds of keen-brained teachers will have then worked out the best methods. Of the books now at hand, Tilden is out of date; Chisholm and Gonne, not suited to American uses; Adams, a valuable collection of important information, but badly arranged for teaching, though the grammar-school edition is better; but MacFarland is the best just now on the market, and his new book of charts and tables is of great value. *Raw Materials of Commerce*, by Dr. Trotter, of the Central High School of Philadelphia, is now in press. I have seen it in proof, and it will be good. Sanford's *Outline Blanks* are good and can be used with or without a text-book. *Great American Industries*, by Rocheleau, is suited to grammar grades, but has much of value mixed with useless matter. Among reference books the new *Workers of the Nation* is unique, and contains live, sound information on American industries. The cyclopædias, even the latest, are not very satisfactory when tested. For example, the two most widely advertised and newly revised have nothing on cattle-raising for food or on beef-packing, etc., which are two of the most prominent American industries. If a teacher plans to buy a cyclopædia, I advise delay.

Among other aids I would say that lantern slides should be used to illustrate the great topics, as wheat, cotton, lumber. Pupils should use outline maps of the United States and the world, and make out one for each topic. They should make charts to show productions. Each pupil in the English High School is required to write three theses each year—one on a food, one on a textile fiber, and one on some manufacture or

industry. The information for this he must get, if possible, from the maker or dealer in the product, and is forbidden to use the books until he has reported to me his success with the man in the business. These theses are an essential part of the course. The boy is allowed to choose from a wide list a subject that interests him, so that he may work with more enthusiasm. No other boy in the same division has the same subject, so the boy must do his work himself. These papers when finished must be typewritten before being accepted. Talks on commercial subjects by men prominent in those lines are often to be had, and are of value. These should be held in the evening and parents and friends invited.

Now, I can imagine that you have been framing the question: "What is the effect and value of this study to pupil and the community?" First and foremost, the boy gains a respect for labor. This will correct one of the most serious evils of the time, viz., the tendency of the youth to choose a profession as the only work giving a position of dignity and reward. To be a workingman is too often considered a thing to be ashamed of and a life of profitless toil, so thousands of men fitted to be leaders of industry crowd the professions and pass their lives in an eternal struggle for a small return, an infinite waste of force. The other day an event occurred which is of the most important in our national history. It was slightly noted in the papers, but not celebrated. The date could well be made a national holiday, if the Fourth of July were not so near at hand.

I refer to the formal beginning of the Department of Commerce and Labor. Do we realize its importance? For the first time in modern history the workman is admitted to the councils of state, and his representative sits in the cabinet, a new tribune of the people, equal in power and rank to the representatives of wealth and influence. A wonderful advance in civilization! If a youth feels work to be noble, he soon sees that financial reward is as great as in the professions. Few professional men earn or expect to earn the salary received by the captains of industry or the managers of great business enterprises. This, then, is the first result of the study of this new science, that the youth turns

to the field of work eager as a soldier to the battle, and learns that to be a captain of industry is a greater glory than to be a captain of war, that the man who builds a city is greater than he who conquers it, and that men who are doing the work of the world are too busy to fight each other.

Secondly, the youth finds his knowledge of commerce and industry an actual asset of value as he seeks a place to begin work. A manufacturer said to me recently that if two boys of equal ability apply to him for work, one a country boy and the other a city boy, he always chooses the country boy, because he has an actual knowledge of real things and can do something. Not quite fair to the city boy, perhaps, but justified from the results. The study of commerce and industry will give to the city boy the same mental precision and accuracy that comes from knowledge of actual things, and so commend him to his employer as a valuable assistant. When this fact is once known, each boy will feel himself obliged to study this subject. A movement is on foot in this city to establish what might be called a "board of trade" examination, the certificate of which will show to the business man that the holder has some real knowledge of business value. No course of study would do so much to train a boy for this test as the science of commerce and industry.

There is one other important result to the community. The business man usually regards a teacher as a necessary evil, neces sary to train the child, but useless to the grown man from his lack of practical knowledge. This opinion is too often just. The trained teacher of commerce and industry will change that popular contempt to respect. When the wool dealer finds that the teacher is able to meet him on his own ground and can discuss wool with him with a clear knowledge of the main subject, if not of all the details, he no longer sneers. When he sees the same teacher turn to the leather man or lumber dealer with equal command of the general subject, his indifference changes to respect for a knowledge wider than his own. When he once gains this respect for the teacher as possessing real business knowledge, he begins to consider the teacher's product — that is,

the trained boy as actually worth something and the teacher's opinion as powerful and worth esteem. In winning this position for himself the teacher of commerce and industry will win the battle for his fellow-teachers of all subjects, because they are united in the training of the boy, and thenceforward, as teacher of men as well as of boys, their influence will steadily broaden and strengthen, while they train boys in sound knowledge to be useful citizens and so lift higher the standard of a free, sane, healthy, national life.

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EDITORIAL NOTES.

GEORGE HERBERT LOCKE.

A BACKWARD STEP IN ENGLISH EDUCATION

THE Education Bill has of course passed through the stages of progress necessary to make it a law, but the end seems not yet. In ordinary American political parlance, it was "railroaded" through, and the interests of the large proportion of the nation who do not belong to the Established Church were disregarded. Despite their protestations, calm and otherwise, the Conservative government, seemingly pledged to the church, drove it through by sheer force, in the hope that when it had become law the agitation would cease and all would "live happily ever after." Indeed, this invitation to the lamb to lie down with the lion has been extended to the dissenting public, but that public seems averse to an arrangement that suggests that the only place for the lamb is inside the lion. The attitude of these dissenters indicates clearly that it was not a mere emotional campaign that they were waging, but that they were fighting for a principle, and that they will not tamely submit to unjust treatment.

On this side of the water there has been much doubt and perplexity about the exact positions of the contending parties, and the details of the question in dispute have not been well understood. Even among the educational public there have been few who could explain the significance of the bill, but there has been a general distrust of a measure which proposed to give such a tangible and practical recognition to schools supported by denominations. Such a feeling is natural in a country like ours, where we believe in the free public elementary school from which all denominational teaching is excluded. The very interesting and lucid statement of the situation by Mr. W. K. Hill in our November number helped to explain the situation up to that time, and we shall publish very soon another statement by Mr. Foster Watson which will enable our readers to understand more clearly the subsequent events. It is unnecessary, therefore, to enter into details now in regard to the specific question of the Education Act.

But following hard upon the passing of the bill the Conservative government has shown that its policy clearly is to hinder the progress of education. There were many in this country who hoped that the government was sincere in its endeavor to improve the educational situation, and they hoped that in the carrying out of the Act there would be displayed an intelligent consideration for the minority. That this will not be the case is indicated by the persistent rumors that have been reaching us to the effect that Mr. M. E. Sadler, the remarkably successful Director of Special Inquiries and Reports to the

Board of Education, had been forced to tender his resignation. This seemed inexplicable to us who have profited so largely by the excellent series of reports issued from his office. The pity of it is that it is true, and we are just now in possession of the facts which led to this loss to American education as well as to English education. This office of Special Inquiries and Reports is the Intelligence Department of the Board of Education. A War Office is not considered of practical value unless there is an Intelligence Department which keeps the responsible officials informed as to the progress of other nations in plans for mobilizing troops, providing the most modern equipment, adopting improved methods of training soldiers, and in fine of perfecting their military plans. A nation must depend upon the Intelligence Department if it is to remain in the first rank in military affairs. Now, it is just as important in education. Up to the time Mr. Sadler took hold of this work the details of the progress in education abroad were unknown, and therefore despised, by the English educators, and indeed the details and significance of the work at home were far from being matters of common knowledge. It was only in 1894 that this intelligent idea of furnishing accurate knowledge of what was being done in other parts of the world was grasped by any of the government officials. Mr. Arthur Acland was instrumental in having the office established, and with the meager pittance of three thousand pounds a year for the entire staff Mr. Sadler has been carrying on this great work. Not only against apathy and small financial means has he been struggling, but the blue book recently issued shows that the Conservative government has been endeavoring by a policy of niggardliness and selfishness to cut down even this small appropriation and thus drive Mr. Sadler to the necessity of resigning the position. It is plain that England under the present government has relapsed into the provincialism that once characterized it; that, as far as education is concerned, the government is composed of "little Englanders" who fancy "England's still from the Strand to Holborn Hill." It takes a mighty catastrophe to wake England up. It needed Colenso and Magersfontein to awaken her to the necessity of having some intelligence in her War Office, but if common reports are true, the effect of these has been worn off, and officialism and unintelligent routine workers will once more reign in that department. Even so is it in education, and the resignation of Mr. Sadler, with the attendant circumstances, will make but little impression upon the minds of the English public. We have an interest in this resignation, as these reports have been increasingly in demand in this country, and we have been led to hope that they would be continued, that we might profit by the excellent material that helped us to form clearer conceptions of what was happening abroad, of the significance of educational movements of which only the most meager particulars could be obtained through other channels, and from which intelligence we hoped to gain that which would improve our own systems of education. There has been no good reason adduced for this unintelligent action of the government, and we are

forced to believe that the present government of England is opposed to the spread of intelligent education. This is why we speak of the forcing out of Mr. Sadler as a backward step in English education.

THE MEETING OF THE NATIONAL EDUCATIONAL ASSOCIATION AT BOSTON

THE National Educational Association gained marvelously in prestige when President Eliot of Harvard accepted the presidency and Boston claimed the privilege of acting as host for the gathering of 1903. All the predictions of our most optimistic educators have been fulfilled, and the meeting at Boston will be remembered for many years on account of the excellence of all the arrangements for the comfort as well as for the inspiration of the educational host. And it truly was a host gathered from all parts of this great country and supplemented by a large number of our northern cousins. This is one of the few times in history when we can say truthfully that there was a presiding genius at the head of affairs. The same sagacity, sanity and dignity which has marked the progressive administration of Harvard was shown in the conduct of this great meeting, and the good effect will be felt throughout the country. The program was planned so that there were no distinctly rival attractions, and the "three-ring circus" feature which unfortunately characterized some of our former meetings was absent. The net result is that one returns to his home feeling that he has had an ample opportunity to get the best there is and that his money has been well spent. The educational public showed their faith in the arrangements by the enormous attendance, the registration being reported as 35,000.

The phase of educational endeavor in which most of our readers are interested is that of secondary education. This occupied a prominent place on the program, inasmuch as the Department of Child-Study devoted a particular session to the problems of the adolescence period. Mr. A. H. Yoder, of the University of Washington, read a paper on "Sex Differentiation in Relation to Secondary Education," in which he took the position that during the period of secondary education there should be coeducation with differentiation in curricula, according with mental and economic differences in sex. He asserted that in many schools there is a real danger of catering to the feminine mental attitude, because there are more girls than boys; the girls are intellectually superior on account of their greater degree of maturity and the growing tendency to employ many women teachers and few men. This condition seemed to produce more or less mental perversion in the boys. On the other hand, girls suffer from lack of opportunity to express themselves educationally. Prejudice due to sex slavery still witholds full freedom from the woman. From the time the average girl is born until her death she is under the control of a stronger will, and this works great harm during adolescence, when there is the supreme attempt to realize ideals.

Mr. E. D. Starbuck, of Leland Stanford University, disagreed with Mr.

Yoder on the point that the sexes would do better in the secondary schools if they were separated. From careful psycho-physical examinations he asserted that the difference between boys and girls of this age, on a psycho-physical basis, is less than the difference between boys and boys and girls and girls, He argued that it is a benefit to train the sexes together.

Mr. A. C. Ellis, of the University of Texas, spoke on "The Percentage of Boys Who Leave the High Schools, and the Reasons Therefor." He said that within eight years our elementary schools eliminate 95 per cent. of their pupils, and within four years more the high schools eliminate 80 per cent. of what is left, leaving 2 per cent. of the original number to graduate. Boston graduates little over 3 per cent. of the children who enter; St. Louis just half as many. In the high schools there are 50 per cent. more girls than boys; 100 per cent. more girls than boys graduate. Making high-school courses elective, treating the pupils sympathetically as individuals, increased the attendance in Galesburg 400 per cent. in seven years. After describing the adolescent stage of development, with its symptoms and peculiar problems, Mr. Ellis says that this self-conscious, hopeful, unbalanced youth is taught in a group of twenty-five, and is cramped into the swaddling-clothes of elementary discipline by teachers who never saw him before, never will see his home life or know his personal surroundings, aspirations, talents, or weaknesses. His courses are largely prescribed, notwithstanding the fact that this is the period endowed by nature with that restlessness and fickleness which compel the organism to try all things and test all its powers. Teachers and parents are urged by Mr. Ellis to learn more psychology and put their courses and discipline in line with adolescent needs.

In discussing Mr. Ellis's paper, Mr. Thomas M. Balliet, of Springfield, Mass., said that he believed that the reason so few pupils remain to enter the fourth year of the high school is that many high schools have three years' courses which are taken by a large number of pupils. These are graduated at the end of the third year and leave the school. Many pupils are sent to high school for only a year or two, mainly for the sake of the social position it will give them, just as many boys are sent to college. Caste feeling cannot safely be ignored today in interpreting school statistics. It accounts in large part for the enormous increase in the number taking Latin in classical high schools. It causes private schools to thrive regardless of the quality of their work. Making due allowance for all these facts, there still remains a problem. No doubt a large number of pupils who leave "to go to work" would remain a year or two longer, if they could receive training along the lines of their future vocation. The introduction of commercial studies, laboratory work, and manual training has stimulated the attendance in high schools.

Mr. J. W. Carr, of Anderson, Ind., took issue with Mr. Ellis's figures, and he seemed to prove his case in regard to his own town. It was an example of the practical schoolman citing examples from his own experience.

Mr. J. K. Stableton, of Bloomington, Ill., then took up the subject of ways and means for increasing the attendance of boys in the high school. He made a plea for the closer relationship of teachers, pupils, and courses of study of the eighth grade with those of the high school. Mr. Stableton is specially fitted to speak on this subject, as he has been marvelously successful in bringing about a closer social relationship between the parts of his school system, between the teachers in these divisions, and especially between the pupils and their teachers. No one who has read Mr. Stableton's little book on the *Western Schoolmaster*, and has followed his work at Charleston and Bloomington, can fail to be impressed that after all it is earnest, sympathetic work on the part of the school officials that conditions success. He said that every teacher should make a study of the growing boy and understand the longing which he has for a friend. Once the boy is well understood, it is not hard to gain his confidence and to lead him on in the right path. Above everything, the quality of the teacher is the important factor in holding boys for the high school.

Mr. Sanford Bell, of Mount Holyoke College, in following up the discussion said that he had made a careful investigation into the comparative influence of men and women as teachers in secondary schools, and had found that of 543 men and 488 women who had answered his questions as to the teacher who had done them most good, 81 per cent. of the men and 50 per cent. of the women testified in favor of men teachers. The kinds of influences named are such as the moral uplift and inspiration, the stimulus to educational awakening and the spur to scholarship, help in getting a clutch upon the great vital issues of life, personal kindness, special interest, encouragement at crises, sympathy when things seemed crushing, self-reliance, hints in social graces. The helpful influence came in 80 per cent. of the cases during the adolescent period; the period of greatest susceptibility for good is at fourteen in girls and sixteen in boys. Mr. Bell infers that up to the age of nine children need the mothering influence of women teachers; between nine and thirteen both seem equally good; for adolescents men teachers seem to be the best; for at this period a child needs a powerful, masterful leader.

Mr. Colin A. Scott, of the Boston Normal, in discussing Mr. Stableton's paper spoke on self-direction as a motive for increasing the attendance, and in this he attacked the curriculum as having a value too remote to interest the ordinary boy or girl.

President G. Stanley Hall, of Clark University, said that lower races have a very short period of adolescence, but that this is prolonged as we ascend the scale. The laggards on the excelsior path—hoodlums, rowdies, vagabonds, vicious, idle dudes and dullards—have often in childhood been full of promise and then in the early teens begun to lapse and disappoint. Sometimes enthusiasm is lost, youth becomes indifferent, and drops into humble stations with content, and there are often morbid symptoms. To avoid this psychic arrest in adolescence, Mr. Hall recommends that there should be an

effort made to avoid strain and make school work vital and interesting; to establish special schools for dullards or slow children, both for their own sake and to relieve the school; to encourage individual study of children at this age; and to found a special institution for the graver cases.

Mr. Adolph Meyer, of the New York Pathological Institute, made a very interesting contribution to the discussion, in which he said that we need greater wholesomeness in the training for human relations and aspirations; a better knowledge of what is likely to rouse a sound interest even in those who are naturally careless and indifferent, and otherwise tickled merely by the sensational or by what gratifies crude emotions. We need a preparation for actual life, not for dream existence. He emphasized the point that we ought to select our teachers to frame the course as a training of life-habits rather than of schooling.

Mr. George E. Dawson, of the Hartford School of Religious Pedagogy, said that the possibilities of psychic arrest are doubtless as numerous as are the possibilities of growth. Of all these possibilities, however, the average teacher is in a position to note only the more general and obvious. Typical of such, according to his experience, are the following: (1) More or less general arrest. Here belong the listless, apathetic, indifferent, dull students. Maladjustment of the student to his work, intellectual confusion, emotional waste due to worry, and excessive fatigue are frequently involved in this. (2) Arrest in the power of mentation. This is characterized by vagueness of expression, diffuseness and incoherence of ideas, impracticable and visionary notions. The principal cause is our excessively symbolic education, by which the student gets the symbols of thought faster than he gets the experience that renders these symbols intelligible to him. The remedy is more natural science, more manual activity, more contact with real things. (3) Arrest in the feelings relating to self. This takes two forms—exaggerated self-regard and exaggerated self-depreciation. The cause is often excessive emulation, the marking system, class honors, wrongly assigned tasks, discouragement, harshness and general selfishness in the teacher.

In the belief that there are vital problems involved in this discussion, we have endeavored to indicate some of the important points made by the speakers, and in that endeavor have kept as far as possible to the language used by the speakers. We recognize that some of their positions are hardly tenable, but the limitations of space prevent criticism. The meeting was specially suggestive, and we hope that our readers in secondary-school work will "think on these things."

THE CECIL RHODES SCHOLARSHIPS

THE first selection of scholars under the Rhodes bequest will be held between February and May next year, and the elected scholars will begin residence at Oxford in the following October. A qualifying examination will first be held in each state and territory, or at centers easily reached, for the purpose of giving assurance that the candidates are fully prepared to enter upon their studies at Oxford.

This examination will be non-competitive and will be based on the requirements for Responsions, the first public examination exacted by the university from each candidate for a degree. The Rhodes scholars will be selected, one for each state and territory, from the successful candidates.

The requirements of this preliminary examination include arithmetic, either algebra or geometry, Greek and Latin grammar, translation from English into Latin prose, and Greek and Latin authors (two books, one Greek and one Latin, or unseen translation). Papers covering this range of study will be prepared by examiners appointed by the trustees, and sent to each center, where, at a date to be publicly announced, the examination will be held under proper supervision, and the papers returned to the examiners. A list of those who have successfully passed this test will be furnished as soon as possible to the chairman in each state or territory, or to the university making the appointment, and from this list the committee or university will proceed to elect the scholars.

It has been decided that all scholars shall have reached at least the end of their sophomore or second year work at some recognized degree-granting university or college of the United States. Scholars must be unmarried, must be citizens of the United States, and must be between nineteen and twenty-five years of age. When several candidates present themselves from a single college or university, the committee of selection will request the faculty of the college to decide between their claims on the basis of Mr. Rhodes's suggestion, and present to the committee the name of the candidate chosen by that college as its representative in the final election.

Candidates may elect whether they will apply for the scholarship of the state in which they have acquired the above-mentioned educational qualification, or for that of the state in which they have their ordinary private domicile, home, or residence. They must be prepared to present themselves for examination in the state they select, and no candidate may compete in more than one state.

Those who propose to apply for these scholarships, should, during January next, notify the chairman of the committee of selection in the state or territory for which they apply, or the head of the university appointing to the scholarship, of their intention to present themselves for examination. The decision of the committee of selection or of the university making the appointment will be final as regards eligibility. Inquiries about Oxford, its colleges and courses of study, will be cheerfully answered by Mr. F. J. Wylie, the Oxford agent of the Rhodes trustees.

BOOK REVIEWS.

SOME RECENT SPANISH GRAMMARS.

A Spanish Grammar. By M. M. RAMSEY. New York: Henry Holt & Co. Pp. 525 (grammar and exercises); 527–610 (vocabulary and index).

THIS book purports to be an abridgment, with a readjustment in the proportion of certain parts, of the author's well-known *Text-Book of Modern Spanish*. We learned with much satisfaction the author's intention of bringing out an abridged edition of his large work. There is a crying need for a brief course from a scholarly and authoritative source, and we felt confident that Professor Ramsey's *Text-Book* contained all the materials from which a very successful brief course could be constructed. We confess to a good deal of disappointment in the results. The new volume contains hardly fifty pages less than the old — a reduction that is inappreciable in a work of such large dimensions. Part II, called "Preliminary Lessons," was the particularly successful feature of the older volume and is the most practicable part of the new one. It abandoned the traditional scheme of Græco-Latin grammars, from the example of which, in most of our modern-language grammars, the old-time sequence of the parts of speech is observed with an air of superstitious reverence. It made the introduction into the study of the language rationally topical, each lesson of the twenty composing the division dealing with some special subject. By this means the essential beginning ideas of each part of speech were presented to the learner in the order of importance characterizing the needs of a living language. We think this principle is the only rational one in modern-language study, although individual ideas will vary greatly in the working out of details.

In the revised edition the author has considerably worked over and rearranged the original second (introductory) part, although its length remains the same — about a hundred pages. The remaining two parts, "Complementary Treatment" (Part III) and "Synopsis of Forms," comprise about 350 and 75 pages respectively. The third completes very fully the matter treated in the second. Yet we think the book would have had its practical value greatly increased if the second, or introductory, part had been enlarged at various points by the incorporation of some material from the subsequent large one, so that it could have stood alone, if desired, in its function of furnishing the learner all the practical grammar he requires for entering actively upon early reading. This might have been accomplished by more evenness of proportion between the two parts, whereby the former would have acquired a greater unity and completeness as a compendious introduction into the language.

In the preface to his older edition the author states that he "believes that exercises, to test the student's progress at every step, and give opportunity to practice what he has learned, are among the most important agencies in education, and ought never to be evaded." The writer heartily indorses this thought and is glad to see it put into effect by the copious exercises, usually well selected, that accompany the new volume as well as its predecessor. This feature is a natural outcome of the wealth of

idiomatic illustrative sentences given for each grammatical principle presented, in itself one of the most valuable characteristics of the old work as well as of the new. But when practical exercises for all forms of inflections are desired at any cost, some puerilities are perhaps inevitable, as *verbi gracia*, Ex. IV, sentence 11: "*¿ Quiere el burro también té y azúcar?* (Does the *donkey* wish likewise tea and sugar?)" It is true that petted animals are sometimes, it is said, regaled with gratuities of sugar, but tea . . . . ?

The book is creditably free from such ethnographical affinities, however, as such the traditional samples of linguistic bulls, like the following: "Has the baker our bread? No, but he has our fine asses;" or, "Have you seen the red cow of the sick general's wife? No, but I have seen the fierce dog of your mother-in-law;" or, "The Italian shoemaker has purchased an Egyptian antelope from the Andalusian merchant;" or, "The professor has pulled the under jaw of the hen (*i. e.*, its teeth?);" and other like curiosities in good repute. This inanity has so discredited the simple but indispensable auxiliaries of language study as to drive teachers to the other extreme, and to give an impetus to distressingly learned forms of grammatical exposition from which composition is banished altogether or made as artificial as the former system was ridiculous. Our author, far from falling characteristically into such slips as the example cited, errs in the other extreme—as if conscious of the older danger to be avoided—and too often sets the student exercises that are bewildering and discouraging for their heavy academic flavor. *E. g.* (p. 116), "Hydrofluoric acid possesses the remarkable property of attacking glass, etc.," or (p. 134), "The beautiful phenomenon of the rainbow is produced by the decomposition which the light of the sun undergoes when it is reflected by the drops of water of a cloud that has been condensed into rain;" and this from a student who quite likely is unable to ask for a glass of water in the idiom he is learning. Such a style of composition, apart from having no practical value for the learner, has the further disadvantage of requiring the introduction of a burdensome vocabulary in quantity and quality, and one as well fitted for a practical purpose as the use of a steam-hammer for crushing egg shells. With certain exercise (*e. g.*, xxii and xxv) the impression is that new and strange terms roll in by the hundred. Small wonder if the student is sometimes disheartened in the presence of such a lexicographical landslide, which is no sooner painfully cleaned up than another tumbles down into its place. Yet, in spite of these defects, the new grammar is incontestibly one of the most important works of its class in the field, and one so uniformly accurate and well arranged that it claims our warm indorsement.

A Spanish Grammar. By SAMUEL GARNER. American Book Co., 1901. Pp. 291 (grammar and exercises); 292–346 (readings), 347–415, (vocabulary and index).

THIS is one of the best of the grammars projected along the time-honored, albeit somewhat outworn, lines of the dead-language grammars, which begin scrupulously with articles, continuing sytematically through to verbs and beyond, and finishing up with "syntax." Many teachers prefer such a system of linguistic exposition which imposes—if it do not discourage—by a thorough and methodic air that inspires confidence. The grave defect of such a scheme, as hinted in the preceding notice, is that it delays reading, and the lively student interest that comes from such an exercise, by postponing to the last the things of prime importance and difficulty which, in some

measure at least, should be brought in early. But doubtless any departure from the beaten track should be made cautiously, and only by a competent guide convinced of his mission; otherwise more harm than good may easily result to the wanderer.

However much one may differ as to methods and systems, Professor Garner's book is unquestionably a good grammar. It has no great novelties of exposition; in his preface the author wisely acknowledges that the field of his grammar admits of little originality. But it is accurate, and one feels throughout the touch of the masterhand in the work of assorting and presenting details. Disputed or complicated points are treated with a degree of common-sense that is refreshing, as, when speaking of pronunciation, he says (preface) that "the objectors [*i. e.*, to English analogies in foreign pronunciation] so far have produced no system sufficiently simple and practical to take the place of such treatment." This is an interesting admission in the frankness with which it puts aside, in an elementary treatise, recondite considerations — phonetic or otherwise — which may properly do credit to the author's scholarship, albeit at the expense of flying high over the learner's head. He adds that "nothing will prove a substitute for the living teacher;" but his theory is apparently that, in the absence of this, we had better be satisfied with the half-loaf of knowledge the substitute may furnish us rather than none at all.

Following this principle, the author sums up the pronunciation of the five vowels, for example, in as many brief lines; *e. g.*, "*e* varies (*sic*) between *a* in *late* and *e* in *where*." Such brevity leaves many future perplexities unsolved. Yet after all, in the present state of the much-disputed subject as to the proper quality of certain Spanish vowels, this is perhaps all that can be safely said, although some might do so in more words with a garnish of abstruse terms.

The exercises are very good, being fairly abundant, and free from puerilities, on the one hand, and academic heaviness, on the other. They are to a high degree practical and useful. The reading supplement seems to us the least satisfactory or successful part of the volume. This does not arise from any criticism we have to make of the style of the selections so much as to their grading, and above all from objection to the principle of tacking on a reading department to a *bona fide* grammar. Teachers differ so widely in their preferences for early reading, and their judgment of the proper grading of this, that it seems impracticable to weigh down a permanent body of linguistic instruction with a mass of reading matter concerning which there is not likely to be any fixed standard of agreement. Admiral Cevera's "Report on the Battle of Santiago" is the most valuable selection, and a piece of literature that, from its superior style, spirit, and historic significance, should have a place in any good Spanish chrestomathy or reader for the use of Americans.

Schilling's Spanish Grammar. Translated and edited by FREDERICK ZAGEL. New York: Henry Holt & Co. Pp. 340.

THIS is the well-known German work recently put into English dress to correspond to the French and Italian editions of the same work. That the book is *safe* and not without substantial merit may be presumed from its having stood the test of numerous editions and a widespread vogue in the German original. It is built on the well-known Ollendorf-Sauer-Otto system, which means that a vast amount of ill-assorted and loosely articulating matter is presented to the learner without any attempt at selection in the interests of the best practical results. The learner will go through the book without much enthusiasm and in a mechanical sort of way, bringing

out of it possibly a fair reading knowledge gained at a disproportionately great expense in time and energy. Each lesson is a huge agglomeration of copious rules and tabulated lists, each exercise is preceded by a good-sized dictionary instalment, presents a mass of composition matter more or less to the purpose, and is followed by a bewildering chapter on *conversación*. A fair representative sample of the methods of the volume is shown by Lesson XL, on the conjunctions (p. 254). Here we are edified by a register of nine different assortments, viz., *copulative, disjunctive, adversative, comparative, illative, continuative, conditional, causal,* and, at last, *final,* the meeting of which one experiences with a sigh of relief — which speedily vanishes when immediately afterward our attention is called to a "List of the Most Common Conjunctions in Alphabetical Order." We counted nearly 150 of these — there may have been some missed — and we came out of the operation with a heightened feeling of respect for this prolific and potent family. But we did not have the courage to tackle the accompanying exercise in which this awesome batallion was expected to give a drill.

This form of grammatical composition may seem appropriate to the Germanic spirit of *thoroughness,* but to the more exigent Americans it would seem dull and depressing, and even unintelligent. We can hardly imagine such a work having much vogue among us as a practical manual of instruction. The method is anything but economical or businesslike. Nor does it preclude infelicities of arrangement, as where, in the account of tenses (pp. 278–84), no mention is made of that characteristic Romance tense construction whereby a past action continuing into the present is expressed by the latter tense (*e. g.*, "I have been here a week"). But this principle, worthy of a special paragraph of explanation and examples, is mentioned in a couple of lines buried in a footnote to p. 68. Nor is precision of statement always to be expected, as where, in the chapter on pronunciation, we are told that Spanish vowels must be pronounced "very clearly," after which follows a distinction between "pure and clear," on the one hand, and, on the other, "broad" (*i. e.*, not "clear?"); or when we are told that *i* sounds like *i* in "sink," "ink," "film," which is rather the way it does *not* sound. This is the case of the half-loaf of knowledge which rapidly disappears to the vanishing point.

But the volume is not without instructive features; *e. g.*, as when we are told in a sentence of the exercise to Lesson XXV (p. 153), "el medio de hacerse rico no es el de escribir una gramática; y si no lo queréis creer, ¡preguntádselo al editor!" We fear that the intrinsic merits of the present work will only too well confirm the truthfulness of this statement.

First Spanish Book and Reader. By W. F. GIESE. New York: D. Appleton & Co., 1902. Pp. 362 (grammar and composition, pp. 189; reader and vocabulary, pp. 193–357).

THIS is a volume in the Appletons' "Twentieth Century Text-Books," of the Spanish department of which Professor Giese is the editor. The present work purports to be a brief grammar and reader combined in one volume, the originality of the undertaking being, as the author claims, "its attempt at fusing the two and at presenting grammar through reading," or, in other words, that the author's "rather boldly minimized epitome of grammatical theory" is dispersed through a large body of reading matter, which is made the basis of imitation and application in the acquisition of the language. There is the usual introduction dealing with the language

sounds and signs. The so-called grammar proper is divided into two parts, comprising thirty "lessons." The leading features of each lesson are an instalment of grammar summarizing some topic — beginning with articles and continuing in the usual sequence — followed by several exercises in which a simple prose extract is dished up in various forms and inversions for easy reading, composition, and conversation. These prose selections are usually well made up, of suitable grade for the purpose, and skilfully combined with a judicious introduction of graded vocabulary. Part I deals with "Accidence" or grammatical rudiments. Part II concerns itself specially with irregular verbs. The "Reader" (85 pages) is composed of extracts (*trozos escogidos*) from *Gil Blas*, a selection from the *cuentos* of Alarcón, and several anecdotal passages. This last part has no particular originality, and might be supplied equally well by any good prose text.

The book is one of the numerous works for language study that attempt to minimize the prescription of grammar by administering it in small doses and disguising its flavor, as a skilful physician does with his drugs, or as the fond mother is said to do sometimes in giving physic to her precious one by covering it up (the physic, not the latter) in syrup or preserves. The coddling, spoon-feeding process has its warm advocates who may profit therefrom in the culture of their tender wards. But we do not mean to say that the present volume is designed primarily for such an effeminate class of youthful patrons. It is is a good work of its kind and shows a compiler of competence for his subject. Yet we doubt whether the system on which it is based can be *safe* in all respects, save when employed by a thoroughly competent director — as the author himself — prepared on his own part to co-operate with it effectively by abundance of scholarship and experience. Without these the linguistic results and the mental training are in danger of being anæmic rather than robust. For the foundation or outline of grammatical knowledge it offers — and the way it is offered — cannot be final for those who aim at acquiring any degree of thoroughness in their conscious hold on the language. It embodies and illustrates one highly important principle — that of recognizing early reading and furnishing abundant drill therein.

Spanish and English Conversation. First and Second Part. By AIDA E. PINNEY. Boston: Ginn & Co., 1902. 2 vols. Pp. 107 and 111.

THE nature of this work is indicated by its title and the prefatory statement that "no attempt has been made to teach the grammar except by example." We are further encouraged by the assurance that by the method employed "the pupil will without conscious effort acquire a grammatical as well as an idiomatic use of the language." Each volume (or book) has twenty "lessons," in the form of a body of Spanish sentences grouped on as many pages and supplemented, on the opposite pages, by an equal number of "verb drills," each based on the corresponding lesson. There follows a body of prose selections for more connected readings. The whole of this matter, including the preface, is then translated in regular sequence and appended to the foregoing as the second half of the volume, which thus serves as a key to the first half. The second volume (or book) pursues the same method and is characterized by the same features, save that it has the further advantage of what the author announces as "a regular progressive scale upward, so that each conversation lesson may prove a stepping-stone to added knowledge of and familiarity with the tongue desired."

No formal instruction of any kind is offered by the two volumes except in pronunciation. But this omission does not necessarily constitute any blemish in the book, since the title formally precludes the expectation of such matter. The pretensions of the author, however, for imparting "a *grammatical* as well as an idiomatic use of the language" cannot be taken seriously. Indeed, the statement is a misnomer tending to lead into distinct error. The volumes, one or both, might be used as an auxiliary of some interest to the regular serious study with classes able to afford such digressions, although these are usually provided, in some measure, by the reputable grammars in use. The work in question has no distinctive originality, and hardly accomplishes more than to add to a collection, already overgrown, of publications trying with indifferent success to solve the problem of short-cuts in language study. If a teacher is desirous of providing a basis of special idiomatic conversational Spanish in his classes, he cannot do better than adopt one of the several good *ecos*, or, better still, the manual to be found in the excellent series of conversational dictionaries (in French, Spanish, and Italian) published by Nutt. In this case he will have something that approximates to sensible classification, while furnishing an abundance of useful practical examples of the current idiom.

R. E. BASSETT.

THE UNIVERSITY OF KANSAS.

Accounting and Business Practice. For Use in All Schools Where Bookkeeping is Taught. By JOHN H. MOORE AND GEORGE W. MINER. Boston: Ginn & Co., 1902. Pp. iv+400, 8vo.

WHILE not differing materially in scope from many of its predecessors, the present work has some points of real excellence. It proceeds directly to the subject-matter, avoiding the vicious precedent of attempting to outline the theory of economics in a text-book on accounting. There is a logical discussion of why entries should be made in a certain way and not merely a formulation of specific rules. An instance of this is found in reference to the treatment of cash sales to regular customers; where satisfactory reasons are given instead of arbitrary directions. The sets of exercises, each setting forth the transactions of some particular business, do not differ merely in the names of commodities and the weights and measures used, but show a real difference in their difficulty and complexity, which increase steadily as the student advances. And, finally, the work is to be commended for clear expression and satisfactory illustrations.

A very few slips appear in the statement of facts or in the use of terms. The definition, "Inventories are all resources and liabilities of the business that are not found in the regular books of entry;" the use of "shares" as applied to bonds, and the statement in regard to the accumulation of surplus by national banks, are errors of so little effect on the general character of the book as to deserve no mention in a review, save in the hope that the notice may lead to a more perfect text in the first revision of the work.

A question may be raised as to whether an elementary text-book should contain matter which cannot concern the great majority of students. The young bookkeeper does not need to know the details of organizing a national bank or of incorporating a stock company. One ordinarily consults a lawyer in such a move and certainly does not rely on the details which may have been learned years before in a secondary-

school text-book. In some other cases the elaboration of details seems excessive. For instance, any extended drill in the various auxiliary records of a bank seems doubly useless, for many of the bank's records are so simple that the green clerk can easily keep them, and, moreover, the organization of banks differs so that the records kept in one may not be used at all in another. The author makes recognition of this fact, yet he provides drill work in writing up pass-books, althought in the more modern banks pass-books are no longer written up; and instructs how to fill out the stubs of drafts, although banks are fast discarding stubs in favor of the draft register.

The usual sets of account books, business forms, and even token money are furnished for use in connection with the text. Only blank forms are given, and the student must write out all the incoming vouchers—drafts, bills, invoices, etc.—as well as the outgoing ones. This means less close conformity to business practice than where fac-simile bills are furnished the student, as has been done by some other authors of text-books on accounting. But it gives additional practice to student, and, incidentally, more work to the teacher.

HENRY RAND HATFIELD.

BOOKS RECEIVED.

[The notice here given does not preclude the publishing of a comprehensive review of any of these books.]

Anthology of English Poetry. By Robert A. Whiteford. Pp. xix + 432. Boston: Benj. H. Sanborn & Co.

English Poems from Chaucer to Kipling. By Thomas M. Parrott and Augustus W. Long. Pp. xx + 401. Boston: Ginn & Co.

These books are much alike and appeared almost simultaneously. The aim in both is to gather typical poems from English writers, and they are intended for use in the upper grades of the high school. The notes are in the main very good, because so few, but the bad example of certain geography makers who insert at the end of each lesson certain questions to be asked has had some influence, and one is bored to find at the end of a poem such a question as: "What circumstances caused this poem to be written?" Of course, one cannot be overcritical in regard to the selections; these reflect to a great extent the interest of the compiler, but some poets suffer. Kipling, inasmuch as he is still living, is credited with only one poem of worth, although in the optional poems suggested by Mr. Whiteford there is given a strange medley. The quotation of phrases from poems is a still more delicate thing to handle, for it is dangerous to separate phrases from the context. One of the phrases from Kipling is a particularly good illustration of this. These books ought to supply a want which teachers of English Literature have felt rather keenly.

Primer on Teaching; with Special Reference to Sunday-School Work. By John Adams. Pp. 129. Price, 20 cents. New York: Imported by Charles Scribner's Sons.

The author of that witty and highly suggestive book, *The Herbartian Psychology Applied to Education*, has given us in this little primer a book that cannot fail to be useful to the teacher in the Sunday school. This is the kind of man to write in this neglected field, and we hope to see much good come from the perusal of this contribution to religious education.

John Ruskin. By Frederic Harrison. Size 5×7. Pp. 216. Price, 75 cents. New York. The Macmillan Co.

The best life of Ruskin we have seen.

New Grammar School Arithmetic. By John H. Walsh. Parts I, II. Pp. 503. Boston: D. C. Heath & Co.

New Primary Arithmetic. By John H. Walsh. Pp. 211. Boston: D. C. Heath & Co.

These three volumes, bound in a startling combination of the colors of Cornell — the red and white — will impress the casual beholder and certainly ought to appeal to children. The introduction fails to inform us as to the reason for such a startling display, but we have no doubt that it is a pedagogical one. The primary volume contains that which ought to be learned during the second, third, and fourth school years. We hope to publish a review of these within a few months.

Studies in the Evolution of Industrial Society. By Richard T. Ely. Pp. xviii + 497. New York: The Macmillan Co.

The first part of this work gives a general survey of the evolution of industrial society; the second treats specific problems which are problems of industrial evolution. This book might very well be used as reference in the last year of the high-school course. We need some such book as this, that the girls and boys may realize the significance of the great movements in the world into which they are about to go.

Simple French, Edited by Victor E. François and Pierre F. Giroud. Pp. iv + 241. Price, 60 cents. New York: Henry Holt & Co.

This book is written to furnish the reading recommended by the Committee of Twelve of the Modern Language Association. The stories have been chosen with the object of affording students the opportunity to read something attractive. A noticeable feature, and we think commendable, is the absence of fairy-tales and legends.

Tales from Wonderland. By Rudolph Brumbach. Translated by Helen B. Dale. Adapted for American Children by W. S. M. Silber. 12mo, cloth. Pp. vi + 122. Price, 30 cents. New York: A. Lovell & Co.

These fairy-stories are intended for children in the upper primary grades.

The Romance of the Civil War, Selected and Annotated. By Albert Bushnell Hart and Elizabeth Stevens. Pp. xiv + 418. Price, 60 cents. New York: The Macmillan Co.

This is the fourth volume in the series of "Service Readers," and in this there is a successful attempt to put before teachers and children the actualities of the Civil War period. This book abundantly sustains the good reputation of the preceding volumes.

First Lessons in United States History. By Edward Channing. Pp. vi + 260. Price, 60 cents. New York: The Macmillan Co.

In some forty chapters Mr. Channing has told the story of the building of the nation. The language is simple without being childish; the facts are well chosen, and the book has some first-class illustrations.

LITERARY NOTES.

TENNIS THE UNIVERSAL GAME.

CERTAINLY of them all tennis is the most universal; small boys, girls, women, men of three generations play it, and the crack has not very much more enjoyment out of it than the duffer. So long as a player feels within him possibilities of growth, he enjoys the game; and even when these fail, even when he realizes that he is slipping backward. he clings on, light-heartedly contesting every inch of the decline with someone of his contemporaries. "If I cannot keep pace with the advancing batallion, I shall not head those who are in retreat," cries your optimist; and so—because tennis players are generally optimists—you will see on any warm summer day veterans urging their old limbs upon the grassy courts, crouching in their play with racket held stiffly, trotting with little, timorous steps, poking at the ball with the gesture of uncertain vision; and you watch them awhile and think perhaps in the pride of your youth: "There can't be much fun in that." And then, while you are looking on, they begin to wrangle about some point; they are suspicious as to whether or not that ball actually did strike the line; and such verbal vitality as those four old men will then display, congregating at the net, wagging their heads, and finally examining the ball itself for traces of whitewash! You do not doubt any longer that their tennis is something of extreme moment to them; and you wonder if with your own occasional slipshod indifference to your rights on doubtful points you do not show an unworthy slight regard for a noble game.—ARTHUR STANWOOD PIER, in the August *Atlantic*.

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MESSRS HENRY HOLT & CO. announce that Kerner & Oliver's *Natural History of Plants* will no longer be published in four parts, but that in future it will be issued in a lower-priced edition in two volumes. The new edition will lack only the colored illustrations of the former more expensive one, which were inserted mainly for embellishment, but retains all the other illustrations, which were an essential part of the work.

OH, Mary had a little mat
Of raffia to sew.
And everywhere that Mary went
That mat was sure to go.

It followed her at home, at school;
Hung by her side at meals;
"Oh, mother, help me splice this on,
Nor mind my stocking heels."

And Johnny had a basket, too,
Of strong rattan to braid!
It kept him from all household tasks,
'Twas neath his pillow laid.

Now, everybody has a loom,
Designed by brainy man,
To weave with rags a beauteous rug
Of most artistic plan.

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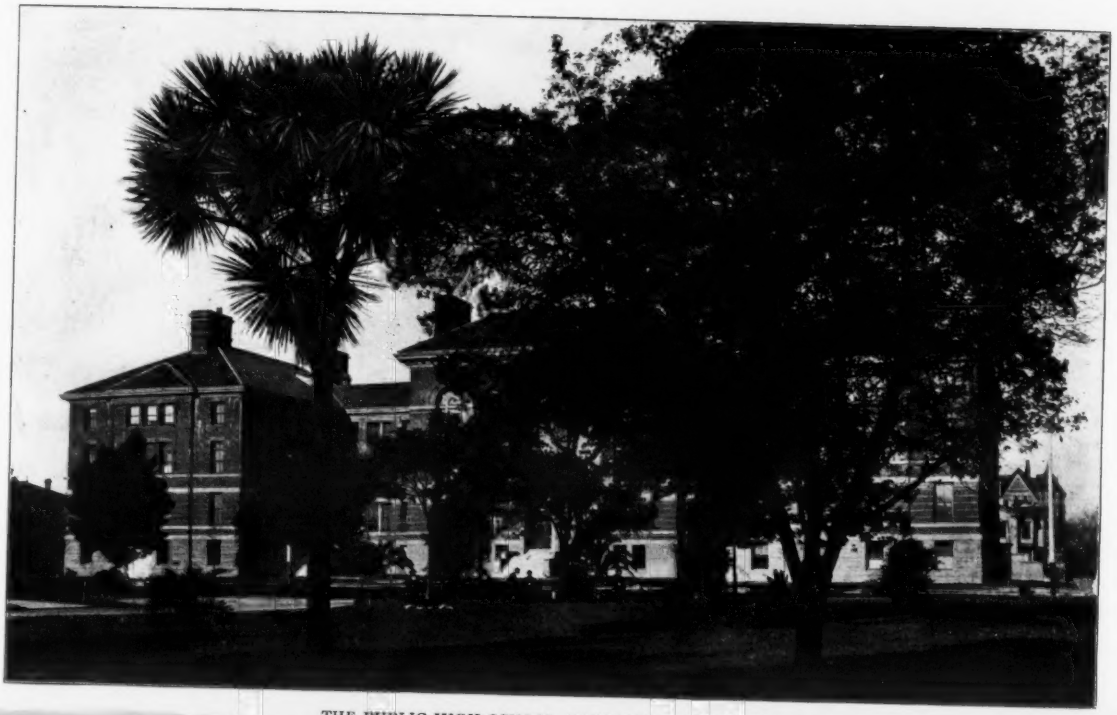

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